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AND THE UNIVERSITY OF NORTH CAROLINA

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The SOUTHERN ECONOMIC JOURNAL

October, 1940

SOCIOLOGICAL PRESUPPOSITIONS IN ECONOMIC THEORY

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This essay concerns the presuppositions, and therefore the scope, of modern economics. Our purpose is not to formulate another definition of "scope," however; it is, rather, to indicate the extent to which "economic" events and processes are shaped by events and processes that are essentially noneconomic or sociological in character,¹ and the degree to which conclusions based upon analyses of intramarket groupings and relations rest upon assumptions relative to extramarket objects, events, and processes. More specifically, it will be contended that relationships *within* the complex of economic markets are not self-determined and self-determining, as price theory has it, but are governed in large measure by the noneconomic (or sociological) components of the cultural² complex of which economic markets form a constituent

¹ Strictly speaking, both the economic and the noneconomic must be subsumed under the sociological, if we accept Sorokin's definition of sociology as that branch of social science whose subject matter is the study "first, of the relationship and correlations between various classes of social phenomena (correlations between economic and religious; family and moral; juridical and economic; mobility and political phenomena and so on); second, that between the social and the nonsocial (geographic, biological, etc.) phenomena; third, the study of the general characteristics common to all classes of social phenomena." See P. A. Sorokin, *Contemporary Sociological Theories*, pp. 760-61. For convenience, however, we shall use the term sociological as synonymous with what, in orthodox economic analysis, is noneconomic.

² Several quotations from B. Malinowski ("Culture As A Determinant of Behavior," *Scientific Monthly*, XLIII, 440, 442) will serve to suggest what we mean by the term culture: "All this artificial equipment of man, material, spiritual and social, we call technically culture. It is a large-scale moulding matrix; a gigantic conditioning apparatus. In each generation it produces its type of individual. In each generation it is in turn reshaped by its carriers. . . . Culture is a determinant of human behavior, and culture as a dynamic reality

and nonindependent part. Wherefore it will be reasoned that economic theory, if too narrowly defined, cannot, however useful and precise it may be within the limits set by its definition, yield an adequate picture or explanation of the socio-economic world about us. It will be concluded, therefore, that economic theory must be extended to embrace the totality of occurrences interconnected with intramarket events and processes, whether or not such occurrences are purely "economic" or "intramarket" in character.

I

The scope of economics has long been the subject of debate. In Europe, the historical, Marxist, and analogous schools have been arrayed against the classical, the Austrian, the neoclassical, and the Lausanne schools. In this country "economics," as conceived by the orthodox, has been rejected as inadequate by institutionalists and others. Of the many lines of cleavage running through economics, at least two are significant for our present purpose: (a) that demarcating the more restricted from the less restricted of the so-called orthodox schools; (b) that separating the anti-orthodox from the orthodox schools.

The line between the less restricted and the more restricted of the orthodox schools is not sharply drawn. In general, the exponents of the latter view conceive of economics as a precise, abstract, theoretical, and positivistic science whence issue universal conclusions and judgments; as a branch of study concerned with the *economizing* or *utility-maximizing* behavior that (it is believed) flows immediately and directly from the fact that human wants are comparatively unlimited in relation to the resources available for the satisfaction of such wants. This general view has been well stated by Robbins:

The subject matter of Economics is essentially a series of relationships—relationships between ends conceived as the possible objectives of conduct on the one hand, and the technical and social environment on the other. Ends as such do not form part of this subject matter. Nor does the technical and social environment. . . . Economic Theory . . . is the study

is also subject to determinism. . . . Every culture must be analyzed into the following aspects: economics, politics, the mechanism of law and custom, education, magic and religion, recreation, traditional knowledge, technology and art."

of the formal implications of these relationships of ends and means on various assumptions concerning the nature of the ultimate data.³

The members of the less restricted of the orthodox schools look upon economics as a non-normative branch of social science concerned with the wealth-getting and wealth-using activities of men; they fail, however, to define with precision what activities are "economic," or to demarcate economics clearly from other branches of social science.⁴

Of the two orthodox views described, the former and narrower has come, and is coming, to predominate.⁵ Many economists, preferring clarity, simplicity, internal consistency, and "completeness" to factual accuracy and inclusiveness, like to think of the economic system as (in Pareto's words): "made up of certain molecules set in motion by tastes and subject to ties (checks) in the form of obstacles to the acquisition of economic values."⁶ These economists, nonetheless, have neglected, in their theoretical formulations, Pareto's warning that since many phenomena which appear to be economic actually depend upon noneconomic social phenomena, political economy cannot by itself supply an adequate explanation of the activities it is presumed to explain.⁷

Despite the injunctions of able theorists,⁸ recent defenders of economic orthodoxy continue to ignore Pareto's warning. For example, R. T. Bye, in a supposedly definitive discussion, does not extend the scope of economics much beyond the limits set by Robbins.

³ L. R. Robbins, *An Essay on the Nature and Significance of Economic Science*, 2nd ed., p. 38. For a fuller description of this view see L. M. Fraser, *Economic Thought and Language*, pp. 29-41; T. W. Hutchison, *The Significance and Basic Postulates of Economic Theory*, pp. 53-57. Fraser suggests (*op. cit.*, pp. 41-47; also "Economists and Their Critics," *Economic Journal*, XLVIII, 196-210) that Robbins and some of his disciples transcend in practice and in what they sanction the circumscribed scope allowed economics by the above definition.

⁴ See Fraser's summary of this view in *Economic Thought*, pp. 21-29; also R. T. Bye, "The Scope and Definition of Economics," *Journal of Political Economy*, XLVII, 623-47.

⁵ Fraser concludes (*Economic Thought*, p. 373): "The history of economic thought is to no small extent the story of how these foreign elements, technical, social, and psychological in nature, have one by one been extruded from the analysis of the value problem, until all that is left is a highly abstract account of the interactions of economic choices and economic obstacles."

⁶ V. Pareto, *The Mind and Society*, IV, sec. 2079, p. 1442.

⁷ *Ibid.*, sec. 2219, p. 1551.

⁸ E.g.: F. H. Knight states that what "price and utility mechanics" has "to say about

Economics is that branch of learning which deals with the social organization and process by which scarce means of production are directed toward the satisfaction of human wants.⁹

J. A. Estey, in a "defense" of orthodox theory,¹⁰ justifies it on the following grounds:

- (1) It limits its investigations to fields where the methods of science are most applicable, . . . to the relations of economic phenomena under present institutions. . . .
- (2) In this field it has been able to draw up reasonably verifiable generalizations which may serve as a guide for policy.
- (3) It is skeptical and reasonably pessimistic, having regard to what seem to be deeply rooted patterns of behavior.
- (4) It has continually shown power to grow. . . .
- (5) It continues to show vitality. . . .

The scope of economics, as implied or suggested by exponents of anti-orthodox views, differs qualitatively and quantitatively from that already described as orthodox. We shall merely indicate certain of these differences, inasmuch as the anti-orthodox have not explicitly defined economics, and as explicitness of definition is not essential to the development of our main thesis. The anti-orthodox fall into three not clearly distinguishable categories: the institutionalists, the Marxians, and those who, while not institutionalists or Marxians, stress the importance of sociological and historical factors and conditions.

real social problems is relatively little, though extremely vital." See "Economic Science in Recent Discussion," *American Economic Review*, XXIV, 238. A. B. Wolfe writes: "The pecuniary margins of utilization . . . are fixed by price resistances, which are in turn, through real costs and rationalizations masquerading as real costs, determined by the institutional matrix of law, custom, class interest, and the inertias of matter-of-fact habit. Failure to realize and to state definitely this fact leaves the total equilibrium concept hanging in the air, cut off from all logically real foundations." See Wolfe's essay in *Explorations in Economics. Notes and Essays Contributed in Honor of F. W. Taussig*, p. 394. See also J. Schumpeter, *Business Cycles*, and J. R. Commons, *Institutional Economics*. Commons' work is rich in materials pertinent to the thesis of this essay, particularly his treatment of negotiation and "reasonable value." See also J. M. Clark's *Social Control of Business*.

⁹ R. T. Byc, *op. cit.*, p. 647. Elsewhere (*Journal of Political Economy*, XLVIII, 123) Byc criticizes the scope of economics suggested by Barbara Wootton (*Laments for Economics*) as "coextensive with sociology."

¹⁰ "Orthodox Economic Theory," *Journal of Political Economy*, XLIV, 791-802, especially 801-802. Estey defines orthodox theory as that which "is neither institutional nor Marxian." (*Ibid.*, p. 791.)

In the United States, until recently, most of the criticism of the orthodox theories and approaches has come from the exponents of "institutional economics," an unintegrated body of thought that grew largely out of Thorstein Veblen's attacks upon the taxonomic, static, and hedonistic qualities of "received" orthodox theory. Institutional economics was implicitly defined as early as 1918 when W. H. Hamilton described it as the only body of economic doctrine that could meet satisfactorily all five of the tests to which, in his opinion, economic theory ought to be subjected—namely: (a) unify economic science; (b) be relevant to the problem of more or less collective control of economic life; (c) take institutions as its proper subject matter; (d) concern itself with socio-economic processes; (e) be founded upon an acceptable theory of human behavior.¹¹ Little if anything has been added to this implicit definition in the past 20 years by later institutionalists.

Marxians differ from both the orthodox economists and the institutionalists; for they make the private ownership of the means of production the fundamental point of departure in their system of socio-economic analysis, look upon the class struggle as the dynamic element in history, and emphasize the economic character of the base underlying institutional and cultural patterns. The Marxians, therefore, reject the ordinary institutional presuppositions of orthodox economics, and, as yet, usually ignore the fact that only orthodox theory is suited to cope with important aspects of the problem of resource allocation.¹² At the same time the Marxians reject institutional economics even though they believe the latter to throw "more light on economic life of today than the equilibrium economics of neo-classicism"; for institutional economics (Marxians say) is not founded upon the Marxian theory of development and therefore is reformistic in character, unintegrated, and defective in theory.¹³

¹¹ "The Institutional Approach to Economic Theory," *American Economic Review Supplement*, IX, 309-18; see also P. T. Homan, "Appraisal of Institutional Economics," *American Economic Review*, XXII, 10-17.

¹² However, a number of economists who are trained in neoclassical theory, and who either favor the collectivization of the economy or consider collectivist problems to be of great import for economic analysis, are now engaged in adapting so-called equilibrium theory to economic planning under socialism. E.g., see H. D. Dickinson, *Economics of Socialism*, and bibliography.

¹³ A. T. Cutler, "The Ebb of Institutional Economics," *Science and Society*, II, 470.

Members of the historical-sociological group have emphasized, as fundamental to the understanding of economic life, elements¹⁴ which, while superficially diverse in character, are fundamentally alike in presupposing the vast importance of underlying ethical and religious values. Thus Sombart, heir of the German Historical School, has stressed, as did this school, the relativity of economic theory and the fundamental importance of the spiritual element (e.g., the "spirit of capitalism") pervading given societies and responsible for their peculiar forms of organization.¹⁵ Weber, too, stressed the importance of the "spirit" permeating given societies, emphasizing, even more than Sombart, the dependence of this spirit upon the ethical valuations of men.¹⁶ Like Weber and Sombart, Durkheim also found "the principal modifying element of the narrow economic factor . . . to lie in the field of ethical valuations independent of utilitarian advantage";¹⁷ for he emphasized the significance of the rules and norms which underlie and condition contractual relations and which rest ultimately upon the common ethical values peculiar to a society.¹⁸ Pareto, too, in his sociological analyses, found, as did Weber,

¹⁴ "Economic theorists have at times emphasized as the main basis of economic theory every major factor around which any of the social sciences has built its own theory. Thus biological evolution is taken to be the key; or the psychological factors of instinct or habit; or rational technology; or the 'predatory' quest of power . . . ; or finally ethical and religious values." See T. Parsons, "Sociological Elements in Economic Thought," *Quarterly Journal of Economics*, XLIV, 659. Recourse to supplementary explanatory elements has not been limited to the less orthodox of economic theorists; for a number of the earlier essentially orthodox economists found less than adequate the fundamental assumption that man normally utilizes limited means in a manner rational and suited to maximize net return above cost (however defined). Even Marshall, as Parsons has been the first to show, found it necessary to add to "utility theory" the doctrine that the processes of want satisfaction are of extreme significance for the interpretation of economic behavior. See *ibid.*, pp. 425-435, 442-45; *The Structure of Social Action*, chaps. iii-iv. Whereas the institutionalists have tended to be descriptive, the historico-sociological writers have tended to be analytical.

¹⁵ See Parsons, "Sociological Elements . . ." *loc. cit.*, pp. 445-451, "Recent German Literature on Capitalism," *Journal of Political Economy*, XXXVI, 641-661.

¹⁶ Parsons, "Sociological Elements . . ." *loc. cit.*, pp. 654-57. Weber differed from Sombart in respect to both the content of the spiritual element and the degree of validity attached to orthodox analysis (*ibid.*, pp. 448-450, 655-57).

¹⁷ *Ibid.*, p. 656.

¹⁸ *Ibid.*, pp. 647-50. "Institutions," in Durkheim's system are "normative rules ultimately dependent on common ethical values"; in Veblen's system they are habitual modes of action and thought, conditioned in large part by the stage of technology and the nature of the contact between groups and technological processes. See *ibid.*, pp. 435-441, 649.

"a principal defect of the orthodox economic analysis . . . in its neglect of the role of common ethical and religious values"; for interclass circulation, which in Pareto's system conditions political and economic policies and their longer run effects, reflects in considerable measure changes in the nature and importance of ultimate and ideal ends to the satisfaction of which community organization becomes oriented.¹⁹ In this country A. W. Small, the sociologist, has dwelt upon the significance for economic analysis of the ethical and spiritual values pervading societies.²⁰ In short, the historico-sociological writers recognize that ethical and religious values are not mere epiphenomena but serve, in some measure, to give shape and direction to purely economic processes.

II

Having touched cursorily upon orthodox and anti-orthodox conceptions of the scope of economics, we shall examine some of the ways in which economic results, or outcomes, are conditioned by factors that are essentially noneconomic and sociological. For convenience we shall defer consideration of change through time until section IV. In this and the next sections we shall assume, respectively, the prevalence and the absence of pure competition, coupled with the absence of change other than movement *within* the market to equilibrium for the given conditions.

Let us postulate, in a closed economy characterized by pure competition, divisibility, mobility, and the presence in all inhabitants of the urge to maximize economic income: (i) s inhabitants who produce and consume n commodities per time period; (ii) a constant supply of r groups of factors of production per time period, each group consisting of identical and interchangeable units; (iii) economic equilibrium in the sense that total income equals total output, unit price equals unit cost, similar factors receive similar rates of remuneration, all factors are fully employed, and no factor (in the existing situation) can or cares to obtain a higher rate of remuneration in an employment other than

¹⁹ *Ibid.*, pp. 653-654, 657; also below, sec. iv.

²⁰ See for example his "The Sociology of Profits," *American Journal of Sociology*, XXX, 439-461.

the one engaging it; (iv) that the income of each inhabitant is fixed solely by the factor prices times the quantities of the several factors owned by said inhabitant. Let us assume, further, that these conditions are expressible in simple equations of the type first developed by Walras and Pareto, and that an arbitrary money unit is employed to give easily comparable concreteness to the relative magnitudes. Solution of these equations will give the unit price and the unit cost of each of the n commodities, the price of each of the r factors of production, the income that flows to each of the s inhabitants, and the quantities that will be produced and consumed of each of the n commodities. Expression of these assumed conditions in equation form, coupled with the solution of the equations, not only gives us the prices and quantities enumerated, and reveals their interdependence; it also enables us to isolate the noneconomic conditions whereon the discovered economic magnitudes are contingent.

Whatever be the economic magnitudes yielded by our equations, these magnitudes are functions of four essentially noneconomic factors, treated under (i) to (iv) below. Furthermore, a broad conclusion implicit in the formulation and analysis of the postulated economic situation is conditioned by a fifth noneconomic factor treated under (v) below. For the present we shall merely describe these noneconomic factors or conditions, treating them as somewhat independent and momentarily static components of our closed economy; we shall ignore both their dynamic behaviour through time and the fact that the full significance of any one such noneconomic variable is discoverable only when it is examined in its contextual relation to all or most other components of the culture complex and field of which it is a part. We shall ignore also the fact that the degree of divisibility and mobility characteristic of factors of production is governed in part by noneconomic conditions, and that the assumed urge to maximize income (or economic income) cannot be treated as a biological constant.

(i) The cost (and therefore price) of any one of the n commodities depends upon the respective quantities of the several factors of production that enter into the production of that commodity. These quantities are given by the technical coefficient of production which is a function, in turn, of the relative

prices of the r factors of production, and of the state of technology and production organization. The prices of the factors of production determine which, if any, of the possible technical combinations of production factors will be selected, whereas the state of technology and production organization governs the character and number of technical coefficients (or combinations) available at any time.

The state of technology and production organization is shaped by many circumstances, only some of which are economic or primarily economic in character. Were it possible to express in numerical terms the quantum of technology²¹ available at any moment, we could explain the distribution of this quantum among various uses in much the same manner as we explain the allocation of factors of production among employments. When, however, we seek what governs the rate of growth of this quantum, we find it necessary to turn outside the price system proper for much of our explanation. For this rate depends not only upon the extent to which the economy is competitive,²² but also upon the nature and degree of diffusion of scientific knowledge, upon the extent of men's understanding of the impact of science upon society, and upon the presence or absence of conditions that frustrate technology²³—in short, upon the "social structure and

²¹ Hereafter we shall use the term technology to cover the state of both technology proper and production organization. We understand the former term to comprehend the state of natural and applied science and the latter to cover the organizational arrangements of which resources are susceptible in any given state of science.

²² Technical improvements are more likely to be made when improved methods already in existence are being employed. See A. C. Pigou, *Economics of Welfare*, 4th ed., p. 190, also pp. 400-401. If, as Abramovitz suggests ("Monopolistic Selling in a Changing Economy," *Quarterly Journal of Economics*, LII, 191-214), the degree of competition diminishes with the growth and maturation of industry, the absolute level of technological progress in any given industry may tend to decline as that industry approaches "maturity."

²³ "In summary, resistance to technological change has been so much a part of the texture of the historical process, that it cannot be ignored when the future of technology is charted. There are psychological factors in individual and group behavior which predispose toward inertia in receptivity to innovation, but these may be counterbalanced by potent incentives that promise material and non-material rewards. The basic determinants of the presence or absence of impediments to technological change lie therefore in the nature of the social, and primarily the economic, structure of a society, in the degree to which it offers incentives to the masses of the population and in the manner in which these can be realized through a planned economy. Capitalism has inherent in its structure and functioning, factors which militate against such realization, and thus prevent industrial practice from keeping apace

the ideological currents prevailing."²⁴ Accordingly, however, we define the economic (as distinguished from noneconomic) determinants of the state of technology, we find this state and its evolution to be affected in large measure by factors that lie outside the market or price system as usually defined.

(ii) The quantity of any of the n commodities that is taken by any individual depends, *ceteris paribus*, upon his tastes; and the quantity taken by the s inhabitants is conditioned by the patterns of tastes prevailing in the economy. Although these taste patterns are shaped in some measure by the profit seeking (and therefore economic) activities (e.g., advertising, mail order catalogues, etc.) of entrepreneurs, they apparently are conditioned predominantly by such essentially noneconomic components of the cultural complex in which people live as technological change,²⁵ prevailing interclass relations, habits and legal commitments,²⁶ religious tenets, the orientation of the cultural life of the people,²⁷ the distribution of income, the geographic distribution of the population, and so on. In brief, for an understanding of the pattern of tastes, it is necessary for the economist to go outside the price system.²⁸

(iii) The manner in which the total income is distributed among the s inhabitants—i.e., the coefficient of income distribution—helps to determine, among other things, the quantities that will be produced and consumed of each of the n commodities, and there-

with scientific knowledge." See B. J. Stern, in National Resources Committee, *Technological Trends and National Policy*, p. 66.

²⁴ B. J. Stern, "The Frustration of Technology," *Science and Society*, II, 7. Many historical and sociological works, both general and specific in character, might be cited. Among the more interesting of the general works are R. K. Merton, *Science, Technology and Society in 17th Century England*, P. Sorokin, *Social and Cultural Dynamics*, II, 125-180; L. Hogben, *Science for the Citizen*; A. Toynbee, *A Study of History*, IV, 40-56; L. Mumford, *Technics and Civilization*; and the work cited in the previous footnote.

²⁵ Schumpeter looks upon "all change in consumers' tastes [as] incident to, and brought about by, producers' action." (*Business Cycles*, I, 73; also II, 1035). However, even if producer innovation be looked upon as the principal source of changes in consumers' tastes, an adequate explanation of consumers' tastes cannot be developed without the aid of a sociological analysis of the economy.

²⁶ For a treatment of some of these elements, see R. T. Norris, "The Analysis of Demand," *Quarterly Journal of Economics*, LIV, 131-142.

²⁷ E.g., see R. Benedict, *Patterns of Culture*.

²⁸ For a discussion of some of the various sociological aspects of this problem, see C. C. Zimmerman, *Consumption and Standards of Living*.

fore influences their prices and costs and the imputed values of the factors of production. The coefficient of the distribution of income is conditioned, in turn, by noneconomic factors. Even in the completely competitive situation, these noneconomic determinants are operative. For in such situation, in which individual income is fixed solely by the receiver's ownership of income producing factors of production, the distribution coefficient depends upon two somewhat sociological factors: (a) the set of circumstances responsible for the relative scarcity or plenitude of the several factors of production; (b) the complex of mores and institutions which govern the ownership and transmission of property and sanction the receipt of income in accordance with the principles implied.

The dependence of the distribution of income upon the institutions which sanction, restrict, or extend rights to income (whether from "property" or "labor") may be illustrated by postulating a system of distribution at the opposite extreme from that given above. Assume a collective economy in which: (a) the supply of the r factors of production is constant and independent of factor remuneration; (b) the factors of production are distributed through competition among the several employments in response to the demand structure; (c) the prices (i.e., imputed values) of productive factors of given classes are everywhere the same; (d) the state controls income distribution, segregates 10 per cent of the annual flow of net product for "future" purposes, and divides equally among the s inhabitants the money flow that corresponds with the remaining 90 per cent of net product flow. Given this situation, the process of pricing productive factors is clearly demarcated from the process of distributing net income, and some human factors receive less whereas others receive more than the imputed value of their services. Moreover, the composition of the total net product, which in the earlier case was determined at the same time as the allocation and pricing of the productive factors and the division of the total income, now assumes a form consistent with the stipulated distribution of money income.²⁹

²⁹ Furthermore, while the money value of the total product would be the same in each case if the monetary factors remained the same, the total values, expressed in price terms, would probably differ because of the greater or lesser adaptability of the productive factors

Whether or not it would be possible to establish the situation just described is not relevant. Of relevance is the fact that, irrespective of the factors conditioning the supply of productive factors, the prevailing distribution of income presupposes certain noneconomic mores, institutions, and sanctions. In the world as we know it, neither of the two extreme systems of distribution is found. Instead, while the income of an individual depends in large measure upon the number and productivity of his resources, public and private agencies appropriate, through taxation, discriminatory pricing, philanthropic drives, etc., part of the income flowing to the owners of some factors of production and transfer this income to other inhabitants whose factors do not yield adequate income.³⁰

(iv) The relative prices (or imputed values) of the r factors of production are fixed, other things equal, by their relative scarcity or abundance. The relative scarcity or abundance of factors cannot be accounted for in terms of the price system even though the allocation of factors among employments in a competitive economy may be so explained in large measure. The total supply of any one type of productive factor is not primarily a function of price; rather, it is conditioned by such noneconomic circumstances as the state of technology, the past income structure of the economy, the geographical location of the population, the distribution (by class and region) of the task of reproducing the population, and so on.

The dependence of factor supplies upon noneconomic conditions

to one or the other of the demand structures. (We are not here concerned with whether or not an equalization of the income structure will reduce the national dividend. Pareto's "law" indicates that inequality will diminish only as a result of an increase in per capita income [see C. Bresciani-Turroni, "Pareto's Law and the Index of Inequality of Incomes," *Econometrica*, VII, 108 ff.]. What is known of human motivation and the distribution of human abilities suggests very definitely that per capita output will be lower in an economy in which complete equality prevails than in one marked by some inequality.)

³⁰ Needless to say, some of the money income thus appropriated comes from the owners of product-reducing as distinguished from product-augmenting agents. For when an economy is not organized in such wise that all costs occasioned by an economic action are incident upon the person responsible for this action, it is possible for individuals (e.g., monopolists, some lobbyists) to obtain compensation for actions that simultaneously increase the incomes of some member of a society and diminish the total income flowing to that society. E.g., see M. A. Copeland's essay in R. G. Tugwell, *The Trend of Economics*; J. M. Clark, *The Economics of Overhead Costs*; A. C. Pigou, *op. cit.*

may be shown by indicating some of the less economic or non-economic circumstances affecting these supplies. (a) The volume accessible, and the flow per time period, of natural resources other than land is conditioned by the state of technology and the resource-extracting equipment available. (b) The volume of agricultural land, when expressed in terms of a fertility index, is conditioned by the state of technology and agricultural practice, past and present, and by the extent to which the farm population is familiar with, and employs, the best known methods of cultivation. (c) The total supply of various kinds of artificial capital equipment available at any moment is the product of past accumulation, and the rate of accumulation per time period is in appreciable measure a function of elements that lie outside the price system proper. The rate of accumulation per time period apparently depends in a negligible degree upon the level of interest rates; it is a function, rather, of the level and distribution of the national income (and therefore of the determinants of these two conditions), of various institutional arrangements, of the presence or absence of war and strife, of the sentiments and tastes of the people, of the state of technology,³¹ of the level of natality,³² and so on. (d) The supply of labor in general (i.e., population ultimately), in a closed economy where Western civilization prevails, is only remotely related³³ (and then sometimes inversely) to the general (i.e., weighted average) wage level.³⁴ The supplies of given kinds of labor, while much more sensitive to the price structure of the economy than is the supply of labor in general, depend in considerable measure upon factors other than the comparative prices offered.³⁵ For example, the distribution of

³¹ See the author's "Economic Opinions and the Future of the Interest Rate," *Southern Economic Journal*, III, 7-28.

³² As Schumpeter points out, "provision for an indefinite family future is of central importance in the scheme of bourgeois motivation, and much driving power may be eliminated by childlessness." See *op. cit.*, II, 1036. The resulting change in motivation may affect both the volume of "saving" and the demand for "capital."

³³ E.g., see H. J. Davenport, *The Economics of Alfred Marshall*, pp. 296-319; also the author's *France Faces Depopulation*, chap. xi.

³⁴ When an economy is open to migration, which is much more sensitive to wage levels in the short and long run than is natural increase, the supply of labor in general is more closely related to the wage level.

³⁵ In this discussion we shall ignore the nature of the supply curve of effort and treat it as bearing, in any one occupation, a constant relation to the number of workers affiliated with

educational opportunity (itself in part a function of income distribution), coupled with the distribution (by social class and region) of the burden of natural increase, causes some types of labor to be recruited much more rapidly than others in relation to the demands for the several types of labor.³⁶ The genetic composition of the population likewise sets limits, other things equal, to the sensitivity of labor supplies to the price structure.³⁷ The determinants of class structure, many of which are not economic in the narrower meaning of the term, likewise serve as regulators of the relative supplies of different categories of labor.³⁸ While other more or less noneconomic determinants of the rate of supply of the several factors of production might be adduced, the evidence presented suffices to indicate the marked dependence of the rates of factor supply upon noneconomic conditions even in an economy competitive in all aspects.

(v) It is generally supposed that, given a completely competitive situation such as we initially postulated, the total income and satisfaction of the inhabitants will be at a maximum. While this inference may be taken to be substantially valid, the actual ratio of the realized sum of psycho-physical satisfaction to the sum of income received is a function of noneconomic circumstances,

that occupation. Actually, as Schoenberg and Douglas have shown ("Studies in the Supply Curve of Labor . . .," *Journal of Political Economy*, XLV, 45-79, especially 71-72), "a variation of 1 per cent in real earnings was normally accompanied by a variation in the opposite direction of from thirteen one-hundredths to sixteen one-hundredths of 1 per cent in the proportion of the population which offered itself for work." And as Vance and Danilevski show ("Population and the Pattern of Unemployment, 1930-1937," *Milbank Memorial Fund Quarterly*, XVIII, 27-43) the loss of 100 jobs caused an increase of 176 in the number of job-seekers in 1930-1937. These two types of response to changes in familial income, however, reflect the influence of underlying tastes. As Mandeville and many eighteenth century writers pointed out, and as employers of labor in "culturally backward" areas have long believed, it is necessary to expand the wants of the laboring population in order to make the supply of workers-times-hours-worked increase in response to an augmentation of rates of remuneration. The amount of productive effort that a given population of working age will put forth per time period depends, in other words, upon the underlying patterns of tastes, wants, sentiments, etc.

³⁶ For evidence see L. Hogben (ed.), *Political Arithmetic*, Part II; J. R. Walsh, "The Concept of Capital Applied to Man," *Quarterly Journal of Economics*, XLIV, 255-285; also the author's "Population Movements and Economic Equilibrium in the United States," *Journal of Political Economy*, XLVIII, 153-182.

³⁷ See the author's "Seed Beds of America," *Journal of Heredity*, XXIX, 475-478.

³⁸ See M. Dobb, *Capitalist Enterprise and Social Progress*, chap. ix.

and will vary as these circumstances vary. Moreover, it does not follow that the r resources are being employed, and that their products are being distributed, in such wise as to yield the maximum possible amount of satisfaction derivable by the s inhabitant from these resources. It is possible if not probable, first, that some alternative distribution of income would yield a greater sum total of satisfaction; and, second, that whatever the postulated distribution of physical income, some modification of the noneconomic cultural medium in which the s inhabitants live would augment the sum total of satisfaction derived by them from their economic resources.³⁹ If this reasoning be valid, it follows that maximum satisfaction, in the sense conceived by economists, is a function not only of purely economic variables but also of essentially noneconomic cultural variables.

III

Let us substitute, for purposes of analysis, an economy permeated by imperfect competition in place of the purely competitive economy postulated in the preceding section. Now total income, however measured, will be less, and this total will be more unevenly distributed; moreover, several rates of factor remuneration may be established for what are essentially similar or potentially similar factors of production.⁴⁰ Non-cyclical unemployment will tend to be more intense than in a competitive economy because of the reduced mobility of labor, and cyclical unemployment will tend to be greater in consequence of both the less effective functioning of the money mechanism⁴¹ and the greater tendency of the income structure to get out of gear relative to the

³⁹ See Norris, *op. cit.*

⁴⁰ It is commonly assumed by economists that potentially similar factors of production tend, in time, to receive similar rates of pay, given such competition as now prevails. With respect to labor, for example, it is supposed that the *wage structure* of an industry (such as the textile) is a very flexible *resultant*. This assumption does not appear to be tenable. Wage structures are in part inflexible *givens* to which the entrepreneur must adjust; for they are shaped and perpetuated by arrangements which reduce labor fluidity and wage modifications. Wherefore entrepreneurs try to make the best possible adjustments of methods of production to these wage structures whenever, because of underlying noneconomic conditions, the structure cannot be dissolved as under pure competition.

⁴¹ On this point see e.g., A. H. Hansen, *Economic Stabilization in an Unbalanced World*, pp. 171-173.

production structure of the economy. For reasons already suggested, the rate of technological progress will be somewhat lower, and the rates at which different factors of production grow in supply will not be the same as in a competitive economy.

Given these and other conditions that demarcate a noncompetitive from a competitive economy, our fundamental thesis still holds: Any given economic outcome is conditioned in an appreciable measure by factors or circumstances which lie outside the "market," outside the realm usually described as "economic." All, or nearly all, of the noneconomic factors described as significant in a competitive economy will also be significant in a noncompetitive economy, even though in different measure. Of especial importance will be the underlying interclass relations, the institutional arrangements bolstering the noncompetitive portions of the economy, and the legal structures and social beliefs that sanction noncompetitiveness and its economic concomitants.

IV

In the two preceding sections we have shown that the disposition of resources and the corresponding distribution of total income under essentially static conditions, whether either free competition or noncompetition predominates in the economy, is conditioned by more or less noneconomic circumstances; in other words, that the relationships within the "market" among the factors composing the "market" are governed in considerable measure by circumstances extraneous to the "market." In the present section we shall show that intramarket relationships change through time in consequence of modifications in extramarket circumstances, and we shall indicate the main sources of such modifications. In the next section we shall show that, as a result of the prevalence and persistence of more or less unforeseeable and unpredeterminable change, the sources of action pursued in given circumstances are shaped by the "expectations" of the decision makers, that is, by anticipations dependent only in part upon the current "market" situation.

The sources of change in the circumstances which, while extraneous to the "market" proper, significantly influence intramarket objects and relations, are many in number, and may be

classified in various ways. For sake of convenience we shall ignore biophysical (i.e., geographical, climatological, and biological) sources of change (which proceed slowly), and lump other sources of change into two somewhat overlapping categories, the technological, and the cultural. In the former category may be placed the Marxian, the Veblenian, and analogous theories of change; in the latter, such theories of change as have been developed by Pareto, Sorokin, O. Spengler, and Toynbee, or are being developed by exponents of "field theory" in social psychology and sociology. Within the space at our disposal we can only sketch several of these theories and urge that, since economic outcomes depend in considerable measure upon extramarket circumstances and events, the tenable portions of these doctrines of change be incorporated into economic theory and made part of the engine of economic analysis.

Marxist writers have clearly demonstrated that intramarket groupings, relations, and movements are governed in a marked degree by both technological change and the distribution of power between economic classes. Marxists hold, if Feuer's interpretation may be accepted, not that there exists at any time "a strict correlation between the economic foundation of society and its [social] superstructure," but that "the economic factor, in the long run, determines the changes in superstructure."⁴²

Two components are involved in the generation of an economic problem, one technological, the other social. The technological component consists of a group of agronomical or engineering facts. . . . The second component introduces what Marx called the 'relation of production,' namely, the relation of men to each other in the economic order; it refers to the class structure of the given society. Both components are interwoven in the genesis of an economic problem. Social problems have a technological origin; the class structure, however, casts the question in its distinctive social terms. . . . Developments in technology produce difficulties that put the existent class system into a state of an unstable equilibrium. Segments of the social superstructure are involved in the economic problem insofar as they obstruct or assist in its solution. A process of social reconstruction gets under way.⁴³

⁴² L. S. Feuer, "The Economic Factor in History," *Science and Society*, IV, 176-177.

⁴³ *Ibid.*, pp. 182-183.

We do not accept the view that technology is anything like an independent variable, or that a given change in technology precipitates social motion toward the establishment of but one type of class system. It is our contention, rather, that the variables, technology and class system, are both autonomous and dependent, and, while affected in some measure by intramarket circumstances, also operate independently of the market and thus give new shape to the latter; that, in consequence, it is impossible for economic theory to provide an adequate explanation of economic objects and events so long as that theory ignores the role of technology and the class system.⁴⁴

Veblen found the immediate source of social change in the alteration of man's habit structure in response to modifications in the occupational discipline to which he is subjected. Man enters the world equipped with certain instincts suited to give rise to any one of a variety of habit structures. The material environment—in particular, the occupational discipline under which man develops—determines which of the several potential habit structures will become predominant. Most important of the elements composing the material environment is the state of technology whereon depend the specific techniques with which men work. Most important of the determinants of the rate of social change, the modification of material environment being given, is the extent to which the population is exposed to this modification.⁴⁵ Of significance for our thesis is Veblen's clear demonstration, in all his works, of the dependence upon extra-market circumstances of the intramarket elements to the analysis of which modern economic theory is usually limited. Of significance for like reason are the somewhat similar theories of change developed by other writers (e.g., Ogburn, Chapin).

Of the theories of change here described as cultural only those of Pareto and Brown will be more than noticed. Spengler's morphological theory of history, Toynbee's challenge-and-response theory, and Sorokin's idealistic-sensate fluctuation theory are

⁴⁴ Schumpeter's works are notable for their recognition of the importance of technology and "innovation" for economic analysis.

⁴⁵ T. Veblen, *The Theory of the Leisure Class*, chap. viii. In this work the germs of most of Veblen's theories are to be found. For the genesis of his views see J. Dorfman, *Thorstein Veblen and His America*; also W. C. Mitchell, *The Backward Art of Spending Money*, chap. xiv.

important, in so far as each is valid,⁴⁶ in demonstrating the remarkable degree to which what actually occurs in the market is determined by extramarket circumstances. A similar statement may be made of effects of the passing of the frontier, of the rise of megalopolitan conglomerations, and of the apparently devitalizing consequences of the growth and spread of "modern civilization" (when hitched to the present socio-economic structure), in so far as the passing of the frontier, megalopolitanism, and "modern civilization" are definable as variables somewhat independent of intramarket relations.

Of the contemporary philosophies of culture none offers greater promise in respect to the analysis of social change than does that type of organismic philosophy called "field-theoretical" or "configurational." The exponents of this philosophy reject the atomistic-mechanistic postulates upon which modern economic theory has been built; their postulates, moreover, are in accord with the fundamental thesis of this essay.⁴⁷ The behavior of a person, or group, according to the exponents of field-theory, is determined by the "field-structure" in which the person or group lives.

Energy exists in organized systems. . . . The whole includes the parts. . . . Nature exists in the form of structured fields, and the structure or arrangement or pattern determines the activity of the individual part. . . . The whole is not to be deduced from the parts, nor does part work on part to make the whole, but what occurs at any given position within the whole is determined by the structure of the whole . . . the existing structure of the field determines the local event rather than the local event's determining the existing structure of the field.⁴⁸

Social change flows from the restructurization of the social field which "works back on the social psychology of the indi-

⁴⁶ See O. Spengler, *The Decline of the West*, P. Sorokin, *Social and Cultural Dynamics*, A. Toynbee, *A Study of History*, p. 1935 ff. Inasmuch as political structures, together with the selective processes associated with such structures, influence, as well as are influenced by, the market factors usually studied by economists, analyses of such structures and processes are of considerable significance for the understanding of "economic" events and processes.

⁴⁷ For an account of field-theory and its relation to certain of the social sciences see W. F. Brown, *Psychology and the Social Order*. See also J. Gillin, "The Configuration Problem in Culture," *American Sociological Review*, I, 373-86; O. L. Reiser, "Aristotelian, Galilean and Non-Aristotelian Modes of Thinking," *Psychological Review*, XLVI, 151-62.

⁴⁸ Brown, *op. cit.*, p. 28; see all of chap. ii.

viduals within this field." Restructurization of the social field—a process that may proceed at varying rates—is a consequence of "invention and manipulation." "Change in physical nature creates changes in the consciousness of some individuals and they in turn change physical nature." Man, in short, "can effect social change within the very stringent limitations placed by the structure of the social field upon him."⁴⁹ Although field-theory philosophy remains very inadequate, as do all theories of change, in that as yet it tells us little of the degree and direction of field change implicit in present cultural situations, it provides a better basis for economic analysis than the body of presuppositions underlying present-day orthodox economic theory; for it recognizes the dependence of intramarket relations upon extramarket circumstances, whether market be defined in terms of a private enterprise economy or otherwise.

Pareto found the principal source of social change in modifications of the proportions in which Class I and Class II residues (i.e., elemental reaction tendencies) occur in the several classes—particularly, the governing class—composing society.⁵⁰ Class I residues, when appropriately restrained, foster "progress"; when unrestrained they accentuate intrasocietal centrifugal tendencies and sunder all-inclusive social organizations. Class II residues, when effective in appropriate measure, restrain harmful individualisms; when completely ascendant, they prevent "progress" and crustify societal forms and organization. Societal change issues from the fact that, as a consequence either of excesses and abuses on the part of the class in power, or of a modification of its residue composition, or of both, power passes out of the hands of one group into the hands of another. Social change, accordingly, consists not so much in a modification of the societal base as in

⁴⁹ *Ibid.*, pp. 458-60.

⁵⁰ According to Pareto there are six principal classes of residues which shape human behavior and society. The most important of these residues, for our purposes, are those included in Class I (i.e., residues of combination) and Class II (i.e., residues of the persistence of aggregates). Class I residues give rise to new combinations; they include such traits as "intelligence" and "resourcefulness" and predominate in the "entrepreneur" type. Class II residues, typified in conservatism and dominant in the "rentier" type, check the inclinations, harmful and otherwise, of individual interest and passion.

fluctuation in the superstructure with the base remaining essentially unchanged.⁵¹

Pareto's theory, in so far as it is valid, is important in that it rejects an implicit presupposition of orthodox economics—namely, that transfer of political or economic power from one category of the population to another is without significant effect upon intra-market relations and events; for, given that Pareto's theory is somewhat valid, the intramarket situation may both affect, and be affected by, changes in the residue composition of strategically situated groups. For example: Pareto admitted that *ceteris paribus*, the substitution of a protectionistic arrangement for freedom of trade would reduce specialization and thus diminish per capita output; he went on to show, however, that if the change in trade policy also involved a sufficient transfer of control over the nation's economic resources from indolent and unambitious individuals to wideawake and energetic men, such transfer might more than counterbalance the initial reduction in specialization and thus result in an increase in per capita output.⁵² Pareto showed further, in accordance with his fundamental presuppositions as to residues and their effects, that modifications in the residue composition of the political ruling class both influenced, and were affected by, the essentially economic sector of societal life.⁵³

Under "cultural" theories may be included also those which emphasize the influence upon economic life and organization of the gradual substitution of a society based primarily upon *gesellschaftlich* principles for one founded upon *gemeinschaftlich* principles. In recent centuries, with the substitution of a private

⁵¹ Pareto's theory, therefore, is not a full bodied "cultural" theory; it is so classified here merely for the sake of convenience. Pareto's theory is developed in *The Mind and Society*, chaps. xii-xiii.

⁵² *Ibid.*, IV, secs. 2208-2222. Nineteenth century defenders of protectionism (e.g., F. List, H. Carey) contended that it would increase income by changing the entire cultural medium and accelerating cultural progress. More recently protectionism and partial autarchy have been defended on the ground that an economy nearly free of external relations could, through the exercise of internal controls over economic fluctuations, more than offset the losses due to the diminution in international division of labor. Each argument must be examined on its own merits, for each transcends ordinary economic reasoning.

⁵³ *Ibid.*, chap. xiii.

enterprise economy for the feudal system and with the concomitant ascendancy of urbanism and decline of agriculture, contractual relationships between men have replaced in ever larger measure noncontractual relationships; orthodox economics, as a matter of fact, has concerned itself almost solely with certain aspects of these contractual relationships. The effects of the substitution of contractual for noncontractual relationships have not been confined, however, as orthodox economic theory would have it, to the economic sector of societal arrangements and organization. On the contrary, this substitution apparently has been accompanied by subtle psychological changes in the population—psychological changes responsible in part for the decline in natural increase,⁵⁴ for the disproportionate ascendancy of individualistic interests, for the decay of democratic practices, and for the seeming triumph of centrifugal tendencies within modern economies, all of which react backward upon the intramarket sector of social life and shape what occurs in that sector.

V

Virtually all market behaviour—i.e., virtually all buying and selling—is future oriented; it is carried out today for tomorrow and in light of anticipations relative to tomorrow. Were our economy free either of all change or of unpredictable change, economic life and relationships would not be characterized by uncertainty, and intelligent but unsure decisions would not have to be made.⁵⁵ The anticipations, or expectations,⁵⁶ of men regarding their economic behavior would always prove correct; and it would therefore always be possible—in fact, virtually inevitable—for each to maximize his “returns” or “income.” When, on the contrary, unpredictable change and its correlate, uncertainty, permeate an economy, entrepreneurs and owners of factors of production can act only in light of future probabilities,⁵⁷

⁵⁴ See the author's *France Faces Depopulation*, chap. xi.

⁵⁵ F. Knight, *Risk, Uncertainty, and Profit*, pp. 266–70.

⁵⁶ The meaning and import of “expectations,” while somewhat implicit in nineteenth century economics, has become explicitly and completely recognized only as a result of progress in the analysis of economic fluctuations. For a discussion of the role of expectations in cycle theory, see e.g., G. Haberler, *Prosperity and Depression*; G. L. S. Shackle, *Expectations, Investment and Income*.

⁵⁷ The term probability is here used in a journalistic, and not in a mathematical sense, for

and in a manner suited to maximize returns; they cannot, as individuals or groups, know just what must be done to maximize returns, and are almost certain not to maximize returns.⁵⁸ Accordingly, since the actual world is one shot through with uncertainty, the best that any one—in particular, the main decision makers—can do is to act as intelligently as possible on the basis of the data available.

When economic behavior is viewed, not as a set of actions as of a given moment of time, but as an uninterrupted series of actions through time,⁵⁹ it is evident that economic change through time, however otherwise it is influenced, is directed and shaped in considerable measure by "expectations"; for behavior through time is in a sense a sum of sets of actions occurring in comparatively short periods of time, and these sets of actions are always influenced by expectations. Accordingly, since, as will be shown, expectations depend in part upon extramarket circumstances, the direction and extent of economic change through time is somewhat independent, on this score alone, of market situations; and since the extent to which an economy serves the ends for which it presumably has been established depends upon the nature of change through time, economic welfare through time is a function of (among other things) the noneconomic determinants of expectations.

The significance for economic analysis of the noneconomic determinants of expectations—already suggested in the broad—may be indicated more explicitly. First, the expectations of the main decision makers in an economy—i.e., of entrepreneurs in a private enterprise economy, and of trust directors in a more collective economy—help shape the course of economic events. Second, with any given economic situation, S (i.e., state of employment, prices, monetary situation, etc.), there may be associated any one of a number of states of expectation, c_1, c_2, \dots, c_n .

one cannot reason in terms of probabilities unless one is dealing with a true "collective," which any portion of the economic future is not. See R. von Mises, *Probability, Statistics, and Truth*, chap. i.

⁵⁸ On the interrelations of expectations, maximizing behavior, and uncertainty, see Hutchison, *op. cit.*, pp. 84-89, 113-14.

⁵⁹ This series may be characterized by one continuous trend, or by changes in trend nonetheless, the fundamental reasoning in this paragraph holds.

Third, out of the present economic situation S there may evolve any one of several future economic situations, $S_{f1}, S_{f2}, \dots S_{fn}$, according as the state of expectations associated with S is c_1, c_2 , or c_n . Fourth, since some one future situation will be preferable to some or all alternative future situations, some one present state of expectations is to be preferred.

Among the more or less noneconomic determinants of the state of expectations, only some of which may be indicated here, the following are significant: state of social psychology; status of relevant education; type of socio-economic organization predominating; definiteness of the goals collectively desired. These determinants, moreover, are both interrelated and affected by the present economic situation. Of the determinants enumerated, the first—i.e., state of social psychology—remains most devoid of concrete content; it is here understood to include all such elements as emotional conditions, motives, relation of centripetal to centrifugal socio-psychic forces, and the like—i.e., all noneconomic elements not included elsewhere, and yet conduct-determining.⁶⁰ The status of relevant education is important inasmuch as the capacity of men to act intelligently is conditioned by both the amount of knowledge possessed with respect to the future, and ability to act rationally on the basis of such knowledge;⁶¹ for inadequacies in education—which are the product in considerable measure of noneconomic circumstances—are almost wholly responsible for man's incapacity to act intelligently on the basis of given data, and partly responsible for his inability to gauge the future satisfactorily. The type of socio-economic organization predominating is important for two reasons: (a) some types are more conducive than others to the assembling of

⁶⁰ E.g., see A. L. Macfie, *Theories of the Trade Cycle*, chap. viii; also E. Taylor's analysis of the Nazi psychological offensive against the democracies, *The Strategy of Terror*.

⁶¹ "Erratic emotion is a less fundamentally disturbing influence than either insufficient knowledge or inability to draw warranted and useful conclusions from what is known. Ignorance is the mother of panic. And, because the most necessary knowledge is knowledge of the future, we must remain largely ignorant. . . . The future is never certain. But in all too many instances, thoroughly warranted conclusions as to future probabilities are not drawn. . . . Lack of knowledge of the future is a fundamentally disturbing factor but the effects of inability to handle logically the facts of the present must not be underestimated. Indeed, if that inability were less, our knowledge of the future would be greater." See F. R. Macaulay, *Bond Yields, Interest Rates, Stock Prices*, p. 15.

relevant information and the placing of this information at the disposal of the principal decision makers; (b) since the quantum of uncertainty permeating an economy depends in part upon the number of autonomous decision makers directing the economy, it will be at a minimum, other things equal, when the number of such decision makers is at the optimum level.⁶²

Of extreme importance is the definiteness of the goal, or goals, for the attainment of which the economy is established. When an economy is mobilized for war there is virtually no competition between goals; a collective head is drawn, as it were, on victory, and all other goals are subordinated to this common objective. When, however, an economy is organized for peacetime purposes, competition between economic goals (e.g., investment versus present consumption), or between economic (e.g., efficient use of resources) and non-economic goals (e.g., the struggle of labor or corporation leaders to obtain vast efficiency-frustrating powers), develops; and, in consequence, the amount of uncertainty associated with any given economic situation increases. Whence it follows that any socio-economic change which reduces competition between certain goals, and does not at the same time influence unfavorably the possibility of achieving other objectives, diminishes uncertainty and improves the present state of expectations.⁶³

VI

Having indicated the importance of both extramarket sources of change and variability in expectations, we may indicate the implication of these two factors for economic analysis. If these factors, and their sociological concomitants as described in the preceding sections, are ignored, economic analysis can be made to yield only one of two sorts of results: (a) given one set of conditions as to factor mobility, etc., the equilibrium that will and must result *ceteris paribus* may be indicated; (b) given another set of conditions (e.g., presuppositions such as underly either cobweb

⁶² What constitutes the optimum level depends on circumstances; it can seldom if ever be realized "automatically."

⁶³ If the mode of analysis employed by W. Köhler in respect to individual behavior (see *The Place of Value in the World of Facts*, chap. ix) can be utilized with regard to social behavior, it may become possible for social scientists to isolate the goals "required" in given cultural situations, and thus reduce intergoal competition somewhat.

theorem analysis, or analyses based upon the possibly accelerating and decelerating character of demand), some type of economic periodicity through time may be isolated. Neither result, however, will appreciably illuminate the future,⁶⁴ nor provide a foundation on which to erect institutions suited either to give better direction to economic activity, or to effect an appropriate and workable balance between the centripetal and the centrifugal forces inherent in all economies.

More generally, in light of what has been said, a new approach to the scope of economics is necessary. Economists at different times find themselves concerned with different problems, some narrowly circumscribed and in effect insulated from the larger cultural matrix, others broadly ramified and intimately connected with this matrix. Hence it becomes impossible to formulate the scope of economics in any one manner suited to cover all cases and problems. Rather, scope in any particular case must be defined in terms of the problem posed for solution. What is more important: It must always be recognized that, given any particular notion of scope, the validity or tenability of the conclusions derived through study of some problem or question can be no more general and significant than the stipulated notion of scope permits. It must be recognized, for example, that just as a grasp of pharmacy does not make one a statesman, so knowledge of Marshall does not make one a prophet or soothsayer, and familiarity with the not overly esoteric tricks described in treatises on money and banking does not make one a potentially competent economic dictator.

It is true, as Mitchell states, that since "human behavior is such a complicated affair those who seek to understand it can ill dispense with any line of attack."⁶⁵ It may even be true, as

⁶⁴ W. Leontief credits Marxian analysis with "an unsurpassed series of prognostications fulfilled, against which modern economic theory with all its refinements has little to show indeed." See "Significance of Marxian Economics for Present-Day Economic Theory," *American Economic Review Supplement*, XXVIII, 5. Any engine of analysis which embodies both the tenable elements of Marxism and the assimilable components of non-Marxian theories of relevant change and of interindividual and intergroup socio-economic relations will necessarily prove vastly more useful than will modern economic theory, however much refined.

⁶⁵ *The Backward Art of Spending Money*, p. 413.

Mitchell intimates,⁶⁶ that the work of the various schools of economics will "combine harmoniously" and give rise to a satisfactory framework. This prophecy is unlikely to materialize, however, unless economists become aware of the underlying sociological determinants of economic behaviour and recognize that analysis of a "seen" part can but inadequately illuminate either "unseen" parts or the "unseen" whole. Moreover, since the structure or framework of the economist's theoretical system determines what facts are important and what data will be amassed and assayed, it is essential that this framework be conceived in terms broad enough to yield understanding of the socio-economic world in which we find ourselves.⁶⁷

In short, if the preceding argument and description be valid, economic science must take as its object not only the interconnected price, demand, and supply variables which, when expressed in terms of appropriate equations, are resolvable into quantities that are simultaneously determinable and determinate. This object must be expanded to take into account: (a) such noneconomic variables as are significantly interlinked with the economic variables enumerated, and upon which the values of the latter are contingent; (b) the more important trends or tendencies immanent in the broad culture complex of which the economic variables constitute parts. In proportion as economic theory is thus expanded it will be freed of the palsy of illusion of concreteness that now afflicts it; and it may be reoriented in ways that will make it much more useful to statesmen and decision makers than it is at present.⁶⁸

⁶⁶ *Ibid.*, p. 412.

⁶⁷ See T. Parsons, "The Role of Theory in Social Research," *American Sociological Review*, III, 13-20.

⁶⁸ Cassel's argument in support of the study of price formation in a closed whole economy may be extended and advanced to support the study of economic behaviour in a closed *whole cultural matrix*. "Science must always, in discussing causes and effects, take the *whole complex* as the object. It can not stop at any arbitrarily chosen link in the chain. It must consider the totality of occurrences which are in economic reality inextricably connected with one another." See *Fundamental Thoughts in Economics*, pp. 13-14.

THE FRONTIER AS AN OUTLET FOR SURPLUS LABOR

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I

There is a good deal of pessimism existing at present concerning the future growth of prosperity in this country, because of the apparent tendency for the rate of growth of the population to decline. Part of that pessimism is based on a belated recognition of the fact that the free land frontier has disappeared, and a tendency to overemphasize the importance of free land and of frontier agriculture as factors in our past growth. One specific theory in this connection is that the existence of large areas of free or nearly free land on the frontier had an important direct effect in maintaining a high wage scale in the cities and in providing a gate of escape for laborers discontented with their situations. This theory was most clearly stated by Frederick Jackson Turner.¹ More recently it has been advanced by economic planners as a reason for changing the rules of our national economy. Mordecai Ezekiel for example writes: "Through most of our history, American citizens were protected from the worst exploitation or deprivation by the open frontier. If business conditions got too bad they could move West, take up free land, and carve out a new career on an equal footing with other homesteaders. By 1900 the last of the good land was settled, and that door of escape was closed."²

The frontier has been referred to as a safety valve for surplus industrial labor. This "safety valve" theory has received several hard blows at the hands of Carter Goodrich³ and others. One object of the present article is to drive some more nails in its

¹ *The Frontier in American History*, pp. 191, 259, 260, 275; also *Sections in American History*, pp. 24, 25, 46.

² *\$2500 a Year*, p. 37.

³ *Migration and Economic Opportunity*. Also articles in *Political Science Quarterly*, June, 1935, and Mar. 1936 by the same author.

coffin—nails derived mainly from the United States Census reports. Another object is to show that the industrial frontier, which is still with us, has for several decades been a more important factor in our growth and prosperity than the agricultural.

If the frontier furnished an effective alternative to the city laborer who was discontented with his wages the use of that alternative should be measurable in the figures of interstate migration. Did the migrants to any great extent come from the cities? Did urban dwellers to any great extent go to the public lands? Was migration most active when industrial conditions in the East were worst? Complete and detailed answers are not possible, but it is possible to show that most of the settlers in the public land states came either from abroad or from nonindustrial states with no large cities, and that many of the migrants from industrial states went either to other industrial states or to the cities in the frontier states instead of to the land. Likewise it is possible to show that the rural districts in industrial states did not grow as rapidly as the cities, thus raising a very strong presumption that emigrants from those states went mainly from the rural districts. Finally, there is evidence that original entries of public lands were more numerous in years of industrial prosperity than in years of depression.

Information covering the birthplace of residents was not collected prior to 1850. The figures since that date do not give full details of age, sex and nativity from which it would be possible to get precise figures showing whether the immigrants into the public land states were of urban or rural origin, or whether they settled on farms or in villages or small cities. However, those who settled in the largest cities can be excluded, and in the largest cities those who came from abroad and from each state can be segregated. After 1860 foreigners who settled in small cities can also be excluded, and after 1900 interstate migrants who settled in small cities.

Since this paper is intended primarily to be a study of the significance of the rural frontier the urban areas will be excluded as completely as the census figures permit, and their significance will be touched on later. First we shall consider the importance of foreign settlement on the frontier.

II

In using the census to analyze the origin of immigrants we must remember that the children of immigrants who are born in any state are counted as natives. Consequently in studying the origin of immigrants it is necessary to consider the ratio of foreigners to interstate immigrants, eliminating the children of foreign or native parents born in the state, or else to classify residents by the nativity of their parents. Likewise we must remember that the immigrants who took title to land were almost all adult males. A comparison of the respective increase in the number of foreigners and natives should be limited to adult males as far as possible. For the census years 1850 and 1860 the best available comparison is that of all white males irrespective of age. For 1870 and later census years figures are available for males of military age (18-45) and of voting age (over 21). Unfortunately these do not separate the natives of the state from natives of other states; consequently they understate the relative importance of foreign immigration. Moreover they do not until 1890 distinguish between urban and rural residents.

Of course some of the foreigners on the frontier were persons who had settled for a while in some eastern state, possibly in some city. But a large part, probably a large majority had been attracted to this country by the lure of cheap land, and planned from the time they left home to join relatives or compatriots in the West. The distribution of nationalities shows that. Immigrants connected by language and religion frequently came in large parties, and even when they came separately tended to settle in adjacent localities. The English-speaking immigrants however (except in Utah) came separately and may have tarried in the East on the way. The Canadians, Asiatics and Mexicans did not come via the East. Moreover those immigrants who first settled in the East were more likely to go west in years when business was booming and unemployment slight, for those were usually years when prices of farm products were high and farming looked attractive, and also years in which new transportation routes were opened up. That is shown by the annual figures of public land sales and entries. Consequently it is not unreasonable to assume that land occupied by foreigners did not have much effect either in increasing the

bargaining power of native laborers or in relieving domestic unemployment.

Negro slaves were not legally entitled to settle on the public lands and are therefore not counted in 1850 and 1860. Natives of the older parts of a state who migrated to a new frontier in the same state were not recorded by the census, but their number must have been small, since by the time they got ready to migrate the desirable free lands in their native states were usually all taken. In any case they could not count at all during the first 20 years of settlement because they were too young to take title to homesteads. Moreover since these new states contained no industrial centers until several decades after they were settled the omission of natives of frontier states does not affect the reasoning or the conclusions of this paper concerning migration as a relief for unemployment or unsatisfactory wages.

In 1850 more than half of all the white males in Louisiana and New Mexico who had been born outside of the state or territory were of foreign birth. In Wisconsin and Minnesota over a third of all the white males in the state or territory were of foreign birth. Outside of Milwaukee over one-third of the entire free population of Wisconsin was foreign-born. It may reasonably be presumed that nearly all of the immigrants, native or foreign, in these states had arrived within the preceding ten years, except possibly in Louisiana.

In 1860 the proportion of foreigners among the white males was still over a third in Wisconsin and Minnesota, and was over one-half in California and Dakota. The increase in foreign-born white males in California was nearly twice as great as the increase in white males from other states.

Between 1850 and 1860 the free population born abroad increased more than the free population born in other states, in Ohio (outside of Cincinnati), Indiana, Wisconsin, California, New Mexico and Utah. In 1860 the foreign-born exceeded the free natives born outside of the state, in Wisconsin, Dakota, New Mexico and Utah.

Between 1860 and 1870 the increase in the foreign-born population was greater than the increase in natives from other states, in Michigan, Wisconsin, Minnesota, Utah, Nevada, Colorado

and California. In fact the number of natives of other states actually declined in Wisconsin and Colorado.

In 1870 the majority of the residents born outside the state were of foreign birth in Wisconsin (excluding Milwaukee), Minnesota, New Mexico, Arizona and Utah. Over half the males of military age or of voting age were foreign-born in Arizona, California, Idaho, Minnesota, Nevada, Utah and Wisconsin. Foreign-born also constituted more than a third of the males of military age or of voting age in Illinois, Michigan, Nebraska, Dakota, Montana, Washington and Wyoming.

In places with less than 4000 inhabitants foreign-born constituted more than one-half of the total population in Idaho and Arizona and over one-third in Minnesota, Montana, Wyoming, Utah, Nevada and California. Over half the population in 1870 were born of two foreign parents, in Arizona, California, Idaho, Minnesota, Nevada, Utah, Wisconsin and Wyoming; over one-third in Dakota, Illinois, Michigan, Montana and Nebraska.

Between 1870 and 1880 the increase in the white population of foreign birth (outside of cities of 25,000 or more) was greater than the increase in whites from other states in California, Indiana, Michigan, Minnesota, Nevada, Utah and Wisconsin. In 1880 the foreign-born (outside of cities) outnumbered natives from other states in Minnesota, Nevada, Utah and Wisconsin.

In 1880 the foreign-born in places of less than 4000 inhabitants constituted more than one-third of the total population in Minnesota, North Dakota, Montana, Arizona and Nevada.

Also between 1870 and 1880 the increase in white males of military age was greater for foreign-born than for natives in Nevada, and in 1880 over half the white males of military age were foreign born in Minnesota and Nevada, and over one-third in Arizona, Dakota, Illinois, Michigan, Montana, Utah and Wisconsin. Over half the population had both parents foreign in Arizona, California, Dakota, Minnesota, Nevada and Wisconsin; and over one-third in Idaho, Montana, Nebraska and Wyoming. Figures for Illinois, Michigan and Utah were not published.

Between 1880 and 1890 the increase in the population of foreign birth (outside of cities) was greater than the increase in natives from other states in Michigan, Wisconsin, Minnesota and North

Dakota. In 1890 the foreign-born (outside of cities) outnumbered the natives of other states in Michigan, Minnesota, North Dakota, Utah and Wisconsin.

Also between 1880 and 1890 the increase in white males of military age was greater for foreign-born than for natives in Minnesota and North Dakota. In 1890 over half of the males of military age (outside of cities) were foreign-born in Minnesota and North Dakota, and over one-third in Arizona, California, Michigan, Montana, Nevada, South Dakota, Utah, Washington and Wisconsin.

Over half the population in 1890, outside of cities of 25,000 or over, were born of two foreign parents in Arizona, Michigan, Minnesota, Montana, Nevada, North Dakota, South Dakota, and Wisconsin; over one-third in California, Idaho, Nebraska, Utah and Wyoming.

Between 1890 and 1900 there were no western states in which the number of foreign-born increased more than the number of natives of other states, but in Michigan (outside of the four largest cities) the number of foreign-born fell less than the number of natives of other states. In 1900 the total foreign-born exceeded the total natives of other states (outside of cities) in Michigan, Minnesota, North Dakota, Utah and Wisconsin. Over half of the males of military age (outside of cities) in North Dakota were foreign-born and over one-third in Minnesota and Montana.

Similarly between 1900 and 1910 the number of foreign-born outside of cities fell less than the number of natives of other states in Michigan, but foreign-born in Nebraska rose while natives of other states fell. The total of foreign-born outside of cities in 1910 still exceeded the total of natives of other states in Minnesota, Michigan, Utah and Wisconsin. Over a third of the males of military age in 1910 were foreign-born, in North Dakota and Montana.

Summarizing the information gleaned from the censuses it is evident that in certain states⁴ over half of the frontier land occupied between 1840 and 1890 must have been occupied by foreigners, and in other states⁵ over one-third. There were also large areas in other states that were occupied by foreigners. Such

⁴ Wis., Minn., N. D., S. D., Idaho, Ariz., Utah, Nev., Cal.

⁵ Ill., Mich., Mon., Neb., Wyo., Wash.

lands were obviously not available for native Americans, either rural or urban, and could not therefore have had any effect in reducing the supply of native labor in the older states. The fact that the native voters permitted their representatives in Congress to grant these lands to foreigners indicates that few voters in the older states believed the opportunity to settle on the frontier to be of any great value to themselves or their friends or relations.

Thus it is probable that from 1840 to 1890 the cheap lands of the states and territories north of the Ohio or west of Texas were more of a safety valve for Europe and Asia than for the United States, except in Iowa, Kansas, Colorado and Oregon. In those states and in the west south central section, the bulk of the immigration was from nonindustrial states and sections.

III

The usual and easy method of distinguishing between "migrative" and "receiving" states is to compare, as of a given census year, the number of natives of each residing elsewhere with the number of residents of each that were born in other states. The difference between the two is what Thorntwaite calls the "birth-residence index." This method does not show changes in trend until many decades after they have occurred.

It is necessary to compare the changes in nonresident natives and non-native residents from census to census to ascertain movements during each decade. Of course such comparisons are not wholly accurate, because some persons have died and others have returned to their place of origin. Moreover they show only net gains and losses, and make no allowance for migrants stopping en route. But the same criticisms apply even more strongly to the more usual method of using the census figures.⁶

The difference in results obtained from these two methods is illustrated by the following examples.

In 1910 the states of Maine, New Hampshire, Vermont, New York, Pennsylvania, Ohio, Indiana, Illinois, Wisconsin, Iowa, Missouri, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Kentucky, Tennessee, Alabama, Mississippi

⁶ For an analysis and criticism of the census figures, with charts, see C. W. Thorntwaite, *Internal Migration in the United States*.

and Louisiana still had more natives residing outside of their boundaries than outstaters residing in them. But the current of interstate migration had been definitely toward New Hampshire, Vermont and Virginia since 1880; toward New York since 1890; toward Ohio since 1900.

Similarly the 26 remaining states in 1910 had fewer natives outside their borders than outstaters within them. But only 22 of these had always had such an excess of immigrants. Massachusetts, Rhode Island, Connecticut and New Jersey had formerly for several decades been sources of emigration. And of the others ten had become sources of net emigration in recent decades—Louisiana and Michigan before 1880; Utah and West Virginia before 1890; South Dakota, Nebraska, Kansas, Arkansas and Texas before 1900; and Minnesota before 1910.

Emigration offset by immigration does not indicate that one state offers more opportunities than another for the population in general or for the wage-earning class. It results from personal or family reasons, or from the specialized nature of certain occupations. Unfortunately a complete comparison on either the net or gross basis cannot be made separately for cities and rural districts. The birthplace of residents in the larger cities has been recorded, but not the place of residence of natives of such cities.

Nativity by states was reported for 29 cities in 1850, for 8 in 1860, for 50 in 1870 and 1880, for 124 in 1890, for 161 in 1900, and for all places with 2500 or more inhabitants in 1910, 1920 and 1930. General nativity (i.e. birth in the United States or abroad) was reported for 29 cities in 1850 and 44 in 1860. For 1870 and 1880 all cities were reported that had 4000 or more inhabitants in 1880; and in 1890 and later census years all cities that had 2500 or more inhabitants. It is possible to compare the growth in the number of natives in each decade for the cities reported at the beginning and at the end, and to subtract these figures from the growth of natives in the state, thus getting the growth in rural districts.

All of the original 13 states, and also Maine, Vermont, Kentucky and Tennessee, had been so completely settled by 1850 that the number of their natives who resided elsewhere was greater than the number of their residents born elsewhere. Moreover none of

these states had ever contained federal public lands available for settlement. Consequently they can be disregarded in this discussion, except as sources of emigration, in which role they were very important.

By 1860 Alabama, Mississippi, Ohio and Indiana were also full to overflowing. The increase in native emigrants during the decade was greater than the increase in native immigrants, which raises a very strong presumption that all of the desirable cheap land had been taken. Later growth in these states was mainly from foreign immigration and natural increase, and more urban than agricultural. By 1870 Wisconsin had also reached this point, and by 1880 Illinois, Missouri, Iowa, Louisiana, Utah, and Nevada. Michigan joined the group before 1890; South Dakota, Nebraska, Kansas and Texas before 1900; Minnesota before 1910. The census announced in 1890 that the unsettled frontier had disappeared,⁷ although 15 western states made net gains from interstate migration in one or both of the next two decades. But the main drift of migration after 1880 was toward the cities—either the older industrial cities of the East and Middle West or the newer ones of the Southwest and Far West. In 1910 the greater part of the natives residing outside of their states of birth were to be found in the states east of the Mississippi, and 48.7 per cent of all native migrants were in urban communities, whereas only 39.9 per cent of the nonmigrant natives were located in urban communities.

The 15 frontier states that gained by interstate migration between 1890 and 1910 all received mainly natives of other agricultural states. Ignoring this fact, however, their total gain in native immigrants 1890 to 1910 was only 3,271,000 and during the same 20 years they lost 798,000 of their own natives, making a net gain of only 2,473,000. But of the 5,119,000 natives of other states residing in these 15 states in 1910 only 3,056,797 resided in rural areas while of the 1,848,344 outstaters in 1890, 1,511,644 resided in rural areas or cities under 25,000. The closest possible calculation of the gross gain in rural areas in these growing states makes it between 1,545,000 and 2,540,000, or between 78,000 and 127,000 a year, and the net gain, allowing for emigration, could

⁷ Eleventh Census, Population, Part I, "Progress of the Nation," p. XXXIV.

not have exceeded 2,473,000, or 124,000 a year. During these 20 years the population of the whole United States was increasing at the rate of 1,452,000 per year, and the native population at the rate of 1,238,000 a year.

If we consider as a whole the 30 states that were on the frontier in 1850⁸ and tabulate their residents at each census according to state of birth, we get the totals showing net immigration by decades (Table I). There was obviously a reversal of trend in the 90's.

The comparative importance of the agricultural frontier as an element in the growth of the nation is illustrated by Table II, which gives as closely as can be derived from the census reports

TABLE I
NATIVE POPULATION OF 30 FRONTIER STATES, 1850-1930

DATE	NATIVES OF OTHER STATES	NATIVES OF FRONTIER OUTSIDE NATIVE STATE	NET MIGRANTS FROM OTHER STATES	CHANGE IN DECADE
1850	2,707,319	641,728	2,065,591	—
1860	4,264,194	1,410,006	2,854,188	+788,597
1870	5,770,714	2,334,940	3,435,774	+581,586
1880	7,171,693	3,692,618	3,479,075	+43,301
1890	8,656,203	5,056,023	3,600,180	+121,105
1900	9,811,351	6,884,105	2,927,246	-672,934
1910	12,549,114	9,506,114	3,043,000	+116,000
1920	14,683,014	11,725,903	2,957,111	-87,889
1930	18,106,856	14,758,839	3,348,017	+391,000

the number of persons residing in rural districts in the frontier states. Because of differences in the definition of rural district the growth in all decades is not exactly comparable, for which reason heavy lines are drawn between figures compiled on different bases, and the differences are marked maximum or minimum as the case may be. For the same reason the absolute numbers reported as on the frontier cannot be compared with the numbers reported for the total United States to indicate the relative importance of the frontier at any given time. Especially in Part C of the table the importance of the frontier is exaggerated, since small and medium-size cities cannot be segregated from the rural districts before 1910.

⁸ They were divided into 18 states and territories in 1850, 24 in 1860, 28 in 1870 and 1880.

TABLE II-A
TOTAL POPULATION (NATIVE AND FOREIGN)

DATE	TOTAL UNITED STATES			AGRICULTURAL FRONTIER ^a		
	Number	Increase	Rate of Growth	Number	Increase	Rate of Growth
			%			%
1790	3,929,214	—	—	0	—	—
1800	5,308,483	1,379,269	35.1	44,615	44,615	00
1810	7,239,881	1,931,398	36.4	388,695	344,080	771.2
1820	9,638,453	2,398,572	33.1	1,185,496	796,801	205.0
1830	12,866,020	3,227,567	33.5	2,248,836	1,063,340	89.7
1840	17,069,453	4,203,433	32.7	4,458,614	2,209,778	98.3
1850	23,191,876	6,122,423	35.9	7,480,781	3,022,167	66.3
1860	31,443,321	8,251,445	35.6	12,379,640	4,898,859	65.5
1870	38,558,371	7,115,050	26.6	14,885,757	2,506,117	21.9
1880	50,155,783	11,597,412	26.0	<u>20,509,571^b</u>		
				19,840,641 ^c	5,623,814	37.8
1890	62,947,714	12,791,931	25.5	23,869,172	4,028,531	20.3
1900	75,994,575	13,046,861	20.7	27,533,937	3,664,765	15.4
1910	91,972,266	15,977,691	21.0	30,611,618	3,077,681	11.2
1920	105,710,620	13,738,354	14.9	31,733,051	1,121,433	3.5
1930	122,775,046	17,064,426	16.1	33,177,200	1,444,149	4.6

^a See note below.

^b Places under 4000.

^c Places under 2500.

TABLE II-B
TOTAL NATIVE POPULATION

DATE	TOTAL UNITED STATES			ON AGRICULTURAL FRONTIER		
	Number	Increase	Rate of Growth	Number	Increase	Rate of Growth
			%			%
1850	20,941,891	—	—	6,960,692	—	—
1860	27,304,624	6,362,733	30.4	<u>10,601,178</u>		
1870	32,991,142	5,686,518	20.8	13,110,750	3,640,486	50.2
1880	43,475,840	10,484,698	31.8	18,162,918	(1,509,572 min.)	23.7+
1890	53,698,154	10,222,314	23.5	<u>24,254,768^a</u>	5,052,168	38.5
				20,925,380 ^b	6,092,850	33.6
1900	65,653,299	11,955,145	22.3	24,686,660 ^b	3,761,280	18.0
1910	78,456,380	12,803,081	19.5	<u>27,629,032^b</u>		
				27,755,969 ^c	2,942,372	11.9
1920	91,789,928	13,333,548	17.0	29,311,182	1,555,213	5.3
1930	108,570,897	16,780,969	18.3	31,070,893	1,759,711	5.7

^a Places under 4000.

^b Places under 2500, native whites plus negroes.

^c Places under 2500, all natives.

This table shows that the greatest numerical increase in the population of the agricultural frontier occurred between 1870 and 1880. That is true of both the total population and the native

TABLE II-C
NATIVES RESIDING OUTSIDE OF STATE OF BIRTH

DATE	TOTAL UNITED STATES			ON AGRICULTURAL FRONTIER		
	Number	Increase in Decade	Rate of Increase	Number	Increase in Decade	Rate of Increase
			%			%
1850 ^a	4,285,912	—		2,697,450	—	
1850 ^b	4,285,912	—		2,710,914 ^c	—	
1860 ^a	5,826,317	1,540,405	35.9	4,164,676	1,453,762	33.6
1870 ^b	{ 6,749,653	{ 923,336 min.	{ 15.8	{ 4,972,560 ^d	{ 807,884 min.	{ 19.4
1870	{ 7,669,802	{ 1,843,485 max.	{ 31.6	{ 5,449,927 ^d	{ 1,285,251 max.	{ 25.4
1880	9,593,106	1,923,304	25.1	6,719,787	1,269,860	23.3
1890	11,501,092	1,907,986	19.9	7,135,258 ^d	415,471	6.2
1900	13,751,587	2,250,495	19.6	7,945,605 ^d	810,347	11.4
1900	13,751,587	2,250,495	—	8,175,217 ^e	—	—
1910	17,271,075	3,519,488	25.6	9,768,586 ^e	1,593,389	19.5
1910	17,271,075	—	—	7,240,194 ^f	—	—
1920	20,718,915	3,447,840	20.0	7,217,354 ^f	loss	loss
1930	25,747,657	5,028,742	24.3	7,174,542 ^f	loss	loss

^a Free population only.

^b White population only.

^c Excluding only the cities also reported in 1860.

^d Places under 25,000 population.

^e Places under 50,000 population.

^f Places under 2500 population.

Note to Table II. The agricultural frontier is here defined as the territory outside of the 13 original states, but excluding Maine, Vermont, Kentucky and Tennessee, and excluding all urban places reported separately by the census. Such urban places, in Parts A and B of the table, include for earlier years all cities with 8000 population or more, and some others; for 1870 and 1880 all with 4000 population or more in 1880; for 1890 and later years all with 2500 population or more. In Part C they include for 1850, 1870, 1890 and 1900 all with 25,000 population or more; for 1860 all with 100,000; for 1880 all with 35,000; for 1910 and later years all with 2500. A few cities under 25,000 were also reported for 1850. The total number of natives residing outside of their state of birth includes native citizens born at sea or abroad, or with their state of birth not reported, thus differing from the figures used by J. A. Hill in the Supplementary Analysis of the Twelfth Census.

population. The greatest increase by interstate migration apparently occurred between 1850 and 1860. Since 1880 the growth of population on the agricultural frontier has been at a slower

rate in each decade than the growth of the whole country. That is true of the total population; the date for the native population was 1890; for interstate migrants 1870 or 1860. The growth of the frontier population, native and foreign together, has been numerically less than the growth of the nonfrontier population in each decade since 1860. If natives alone are considered this date would be 1890, but the growth in the number of interstate migrants on the frontier has been less than the growth in the number of interstate migrants elsewhere in each decade since 1880. The number of interstate migrants on the agricultural frontier has actually been declining since 1910, or possibly 1900, although interstate migration in the older states has increased steadily.

Summing up, the free lands of the frontier were insignificant as an attraction for residents of older states after 1890. The agricultural frontier lost its importance as a safety valve for surplus population nearly two generations ago, and was replaced by an industrial frontier which grew in importance until the latest census, and for all we know may grow for many years to come.

IV

Of the 1,628,226 natives of seven industrial states living in 1850 outside of their states of birth 649,917 had migrated to other settled states and 43,637 to cities in the frontier states, leaving only 934,672 or 57 per cent for the frontier farm lands. Professor Goodrich has shown from a study of contemporary newspapers that most of the emigrants from the industrial states to the West apparently came from the rural areas. His conclusion is corroborated by the fact that in each of the industrial states the growth of the cities from 1840 to 1850 was more rapid than that of the state as a whole. Unfortunately it is impossible completely to isolate the effect of foreign immigration in this comparison. But from 1850 to 1860 the growth of the native American population in Boston, New York, Philadelphia, Baltimore and Cincinnati was more rapid than the growth of native American population in the states where the cities were located, although each one of those states lost more natives by interstate migration than it gained in that decade. Likewise the number of inhabitants of these cities who were born in the state increased at a more rapid

rate than the number of inhabitants outside of the cities who were born in the state. Plainly the emigrants from those states went mainly from the rural districts in that decade.

The truest generalization that can be made about our internal migration is not that industrial laborers went west, but that rural dwellers and foreign immigrants either went west or into the industrial cities. That was true before the Civil War, and increasingly so as time went on.

The seven public-land states of the South (including Missouri and Texas) were almost entirely settled by emigrants from the nonindustrial states of the Old South—Virginia, North Carolina, South Carolina, Georgia, Kentucky and Tennessee. This is shown by the recorded birth-states of their residents in every census from 1850 on.

Oregon was settled mainly by natives of Missouri, Illinois and Kentucky, in the years before 1850, and mainly by natives of these states and of Ohio, Iowa and Wisconsin in later years.

The preponderance of natives of nonindustrial states among the early settlers of the frontier can be briefly summarized as follows. The seven industrial states of the East had in 1850, 7,500,647 free natives resident in the United States; the ten nonindustrial eastern states⁹ had 6,197,499. But although the natives of the industrial states were 1.21 times as numerous as the others, and emigrants from industrial states were 0.89 times as numerous as emigrants from the others, the natives of the industrial states residing in the 18 frontier states and territories were only 0.72 times as numerous as the natives of the eastern nonindustrial states residing on the frontier.¹⁰ They were a minority of the interstate immigrants in every frontier state except Ohio, Michigan and Wisconsin, and in Wisconsin they were a minority of all immigrants including foreigners.

If the eight largest cities in the frontier states are deducted the remaining immigrant population of these states was composed of 591,655 foreigners, 1,324,754 natives of nonindustrial states and only 934,672 natives of industrial states, but not necessarily from the industrial parts of those states.

⁹ Including Ky. and Tenn.

¹⁰ Only 0.71 times as numerous outside of the four large cities.

A similar situation is shown by the census of 1910, two generations later. The 14 former frontier states still gaining by interstate migration contained, excluding cities of 50,000 or over, 5,072,990 immigrants, of whom 1,224,691 were foreigners, 1,653,768 natives of 15 industrial states, and 2,194,531 natives of 34 nonindustrial states. But if all places with 2500 or more inhabitants are excluded there were only 3,744,097 immigrants on the frontier, of whom 886,092 were foreigners and 2,858,005 natives of the United States. Immigrants from industrial states residing in the 14 receiving states were only 0.75 times as numerous as immigrants from nonindustrial states, although the total number of natives of the industrial states was 1.27 times as great, and the total number of natives of the industrial states living outside of their states of birth was 1.21 times as great.

Assuming that the residents of the rural districts came from industrial and nonindustrial states in the same proportions as the residents of all places with less than 50,000 population, the number of migrants from industrial states actually located on the public lands must have been under 1,250,000 or less than 3 per cent of all their natives and less than 14 per cent of all their emigrants.

The industrial districts of the East ceased at an early date to contribute substantially to the stream of immigrants to the open spaces of the West. The opportunities for employment in industry and commerce were more attractive to most of their residents than the agricultural opportunities of the frontier. In fact many cities attracted migrants from the rural districts in their own states even while the state as a whole was contributing more native emigrants than it received from other states. It is rather farfetched to believe that the emigrants from states where the industrial centers were growing more rapidly than the rural districts came in any great numbers from those industrial centers. That would require the assumption that the emigrants from the cities were more than replaced by rural immigrants, which could only be true if the urban workers had more confidence in their prospects as frontier farmers than those who were trained as farmers, and the rural workers more confidence in their prospects as industrial workers than those who were brought up in industrial surroundings. It is almost certain that the more rapid growth of

the native population in cities than in the rural districts of the same state indicates that emigrants from that state were mainly from the rural districts. That would have to be true if by "natives" we mean natives of that state. If "natives" means natives of any part of the United States the more rapid growth of the cities could be partly caused by immigration from other states. But if the state as a whole was losing more than it received in a given period it still remains necessary that the emigrants should have come mainly from the rural districts.

How early the older states ceased to be important sources of migration to the frontier is a question to which different methods of analysis give different answers. We may consider the year in which the number of natives residing outside of the state reached its maximum (A); or the year in which the proportion of such emigrant natives to the total natives of the state reached its maximum (B); or the year in which the excess of emigrants over immigrants reached its maximum (C); or the decade in which the growth in the number of emigrants first fell below the growth in the number of immigrants (D).

It is possible to indicate A and B for the United States as a whole. The number of natives residing outside of their state of birth reached its maximum (25,388,100) in 1930, but the highest ratio of such natives to the whole native population was attained in 1860 (24.7 per cent). After falling to 20.6 per cent in 1900 the ratio rose to 23.4 per cent in 1930. The increase after 1900 was the result of the attraction of the cities, not of the agricultural frontier.

V

A little more information on the direction of migration from industrial areas can be obtained by following migrant natives of Massachusetts and Rhode Island, the two most highly urbanized states, from 1850 to 1880, which was the period in which the agricultural frontier was most attractive and accessible.

In 1850 these two states had 242,882 nonresident natives, of whom 26,019 were located in the 29 largest cities, 158,186 outside of cities in the 17 older states or the District of Columbia, and only 58,677 outside of cities in the 18 frontier states. Less than one-fourth of the emigrants from these states and less than 5.6

per cent of all their living natives were on the frontier. There were more in New York State than in the 18 frontier states put together. There were more in New York City than in any one of 15 frontier states.

In 1880, a generation later, Massachusetts and Rhode Island had 316,970 nonresident natives. Of these 85,281 were located in the 50 largest cities, 167,342 outside of cities in the 26 older states and 64,347 outside of cities in the 21 frontier states. Obviously, nearly all of the increase in nonresident natives was in the 50 largest cities (i.e. those over 35,000). Only one-fifth of the emigrants were on the frontier, and only 4.1 per cent of all the natives of Massachusetts and Rhode Island.

Moreover these was a movement of natives from the rural districts of Massachusetts and Rhode Island to the cities. In 1850 the natives of Massachusetts and Rhode Island residing in their states of birth numbered 797,877; in 1880 1,241,052—an increase of 56 per cent. But natives of Massachusetts residing in Boston and natives of Rhode Island residing in Providence increased from 93,055 to 244,432—an increase of 163 per cent. Outside of these two cities the increase in natives of their respective states was only 41 per cent. In 1880 there were also 148,124 natives of Massachusetts residing in six Massachusetts cities that were not reported by nativity in 1850, but whose total population amounted to less than 100,000 in that year. The increase in natives of Massachusetts in these six cities must therefore have been more than 48 per cent, probably very much more. In view of the rapid growth of the cities and the slower growth of the nonurban districts it is reasonable to suppose that few of the emigrants went from the cities.

In 1850 the number of natives of other states residing in Massachusetts and Rhode Island was 156,488, of whom 27,748 resided in Boston and Providence. In 1880 the number of natives of other states in Massachusetts and Rhode Island was 301,080, of whom 80,393 were in Boston and Providence and 46,472 in six other cities. The attraction of urban life in Massachusetts and Rhode Island on natives of other states had a more powerful effect between 1850 and 1880 than the attraction of the frontier on natives of Massachusetts and Rhode Island.

VI

In addition to the continuous effect of the agricultural frontier in maintaining high wages in the cities by affording an outlet for discontented laborers, it is said to have assisted in bringing depressions to an end by furnishing employment for those thrown out of industrial activity. If there is anything in this theory it should be shown by comparisons of the censuses preceding and following the severe depressions that culminated in 1843, 1878, and 1896. The industrial cities should show a smaller growth and the rural districts of the frontier states a more rapid growth than the national average. This should be especially true of the native residents, because foreigners are sometimes compelled on account of their language to live in compact groups.

For the decade 1840-1850 there are no separate figures for natives and foreigners. For a fair comparison of rates of growth it is necessary to omit the territories acquired from Mexico after 1840¹¹ since their population in 1840 is unknown. In the remainder of the country the increase in total population was 5,744,000, or 33.8 per cent. In the 14 public land states¹² the population grew 2,788,000, or 57.8 per cent.

But the population of the 50 largest cities grew 1,050,000, or 72.0 per cent, and the population in the frontier states, outside of the 50 largest cities, grew only between 2,504,000 and 2,538,000, or between 54 and 55 per cent. Thus it is apparent that the growth of the large cities was at a faster rate than the growth of the agricultural frontier. The older states, outside of the 50 largest cities, only grew 2,170,000 or 19.9 per cent, but the large cities of the East grew more than 802,000, more than 63 per cent. The reasonable presumption is therefore that in spite of the industrial depression the growth of the frontier was mainly from the rural districts of the East (or from Europe). If any unemployed city dwellers went west they were more than replaced by former residents of the eastern rural districts or of Europe.

The census of 1850 shows that the total number of natives of the

¹¹ Including in 1850 the territories acquired from Mexico the increase in the total population of the United States was 6,122,000; in the frontier states 3,167,000; in the 50 largest cities 1,070,000; in the frontier states outside of the largest cities between 2,848,000 and 2,882,000.

¹² Ohio, Ind., Ill., Mich., Wis., Minn., Ia., Mo., Fla., Ala., Miss., La., Ark. and Ore.

seven industrial states residing on the frontier was small, only 934,672. Probably less than 330,000 of them had migrated during the decade, and most of those had probably come from the rural districts of the industrial states, since in each one of the industrial states the cities had grown faster than the rest of the state during the decade.¹³

This more rapid growth of the cities in the industrial states could not have been the result of foreign immigration only, because if the total number of foreigners reported in 1850 is deducted from the population of both the states and the cities,¹⁴ on the extreme assumption that they all arrived after 1840, the cities still grew at a faster rate than the rural districts, except in Massachusetts and New York.

Plainly the emigrants from the industrial states were mainly natives of their rural regions, not unemployed city workers. Moreover the records of the Land Office show that the greatest volume of public land sales did not come in the years of greatest industrial unemployment.¹⁵ The depression lasted from April, 1837, to August, 1845, with an interval of prosperity from the middle of 1838 to the fall of 1839. The peak of public land sales was reached in the second quarter of 1836, and another peak in the second quarter of 1846. Land sales were conspicuously low in every state in 1841 and 1842. They were high in 1840 in Missouri, Arkansas, Louisiana and Iowa; high in 1843 in Alabama; high in 1844 in Illinois and Missouri; but in none of these states did the amount of land sales equal the peak years of 1836 and 1855, which were years of business prosperity. As a general rule throughout our history sales of public lands have been greatest in the prosperous years of each business cycle.¹⁶

In the decade 1870-1880 the native population of the whole United States grew 10,458,000, or 31.8 per cent. The native

¹³ For this comparison 53 cities are used, being all those of 5,000 or over in 7 industrial states that are reported in both censuses. The 53 cities grew 786,000, or 63.9 per cent; the rural districts of the same states grew 1,045,806, or 21.3 per cent.

¹⁴ For this comparison only nine cities can be used, as the foreign population of other cities was not reported. For Maryland and Baltimore only the free population can be used.

¹⁵ Cf. A. H. Cole, "Cyclical and Secular Variations in the Sale of Public Lands, 1816-60," in *Rev. Econ. Statistics*, Jan. 1927.

¹⁶ Figures since 1868 are available in the reports of the General Land Office.

population of urban districts (with 4000 or more inhabitants) increased 3,129,000, or 45.3 per cent; that of the 50 largest cities increased 1,655,000, or 43.4 per cent. The native population of 27 frontier states¹⁷ increased 5,783,000, or 44.8 per cent, but outside of urban districts it increased only 4,776,000 or 42.3 per cent. The native population of rural districts in the older states grew only 2,724,000, or 18.0 per cent. As shown in Table I there was a smaller increase in the number of natives of the East residing in the 28 original frontier states than in either of the two previous decades or the following decade, and such increase as occurred was almost wholly offset by migration in the opposite direction. If the five most completely settled frontier states are eliminated, the remaining 23 show likewise a smaller net growth by interstate migration in the decade 1870-1880 than in either of the two preceding decades. The 16 frontier states that received more migrants than they lost received mainly natives of the older frontier or agricultural states: Ohio, Indiana, Illinois, Wisconsin, Missouri, Kentucky, Tennessee, Alabama, and Mississippi. The large increases in population of the frontier states between 1870 and 1880 shown in Tables II-A and II-B were caused not by migration from the East but by foreign immigration and natural increase. The large increase in the number of interstate migrants shown in Table II-C was not the result of migration from the East, but of migration from one frontier state to another. Presumably therefore it resulted not from industrial unemployment but from unsatisfactory agricultural conditions in the older frontier states.

In the decade 1890-1900 the native population of the whole United States grew 12,082,000 or 22.5 per cent. The native population residing in large cities (i.e. those over 25,000) grew 3,879,000 or 39.9 per cent. The native population of 24 frontier states grew 4,896,054, or 31.0 per cent, but outside of large cities only 3,989,867, or 21.7 per cent. The total population of 24 frontier states, outside of urban places with 4000 or more inhabitants, grew 3,119,000, or 20.9 per cent. Rural districts in the older states grew only 2,349,000 or 8.6 per cent (native and foreign together). As shown in Table I there was a considerable loss by

¹⁷ The original 28 less Ohio.

interstate migration in the 30 original frontier states as a whole. Only 13 of them made net gains, principally at the expense of the older 17. Michigan, Iowa, Missouri, South Dakota, Nebraska, Mississippi, Arkansas, and Nevada were conspicuous among the losers. If large cities are eliminated, Ohio, Alabama and Louisiana also lost large numbers both of their own natives and of natives of other states, although their cities gained.

According to the censuses of population the decades of depression showed less migration from the East to the agricultural frontier than the decades of prosperity. That was natural because the years of depression were years of low farm prices and numerous farm foreclosures and limited farm credit. Strangely enough the censuses of agriculture show that the number of farms in the country as a whole tended to increase faster in depression decades. The decade 1870-1880 was the outstanding example, but 1890-1900 and 1930-1935 showed the same phenomenon. That was not wholly the result of new settlements; it was partly due to splitting up of large farms and the reoccupation of temporarily abandoned farms in older states. Between 1870 and 1880 the number of farms increased in every state. The greatest increases, in absolute numbers, were in Texas, Kansas, Iowa, Georgia, Alabama, Missouri, North Carolina, Michigan, Illinois and Ohio. The greatest proportionate increases were naturally in states with comparatively few farms at the beginning of the period—Nebraska, Idaho, Arizona, Kansas, Texas, Wyoming, Colorado, Florida, Oregon and Washington. Judging from the sales of public land the chief settlement in those states was in 1871 and 1872—before the depression began.

By 1890 the free lands of the frontier were practically gone, except in Oklahoma, and in the depression decade that followed the number of farms in the west north central states showed less of an increase, absolutely and proportionately, than in the previous decade, and less than the national average rate of growth. The number of farms grew at a slackened rate in the Pacific states, but still rapidly. The number of farms increased somewhat in all states except Maine, Rhode Island and the District of Columbia, but the total rural population declined in Ohio, Kansas, Nevada and five older states. It increased very slowly in Michigan, Nebraska, Iowa, South Dakota and Arkansas. There was a great

exodus from the north central and east south central agricultural states to Oklahoma and the Pacific and Mountain states (excepting Utah and Nevada). The greatest increases in number of farms were in Texas, Oklahoma, Mississippi, Alabama, Kentucky, Arkansas, Georgia, Tennessee, Missouri and Louisiana. The greatest proportionate increases were in Oklahoma, Arizona, New Mexico, Idaho, Montana, Wyoming, Utah, Washington, Nevada and Louisiana.

Between 1920 and 1930 the total number of farms in the United States decreased by 160,000, but between 1930 and 1935 it increased 524,000 or 8.3 per cent. The ten states with the greatest increases were in order: Ohio, Kentucky, Tennessee, Michigan, Virginia, West Virginia, Missouri, North Carolina, Indiana and Pennsylvania. The greatest proportionate increases were in Connecticut, Massachusetts, New Mexico, Arizona, Rhode Island, West Virginia, Florida, Washington, New Hampshire and Oregon. The number of persons living on farms increased in the country as a whole by 1,355,557. It declined in Iowa, North Dakota, South Dakota, Nebraska, Kansas, Georgia, Mississippi, Oklahoma, Texas, Montana, Colorado, Nevada and California, although the number of farms increased in each of those states except Mississippi. The greatest increases in number of persons living on farms were (absolutely) in Kentucky, Pennsylvania, Ohio, West Virginia, Virginia, Tennessee, Missouri, New York, Arkansas and Michigan. The greatest increases proportionately were in Connecticut, Massachusetts, Rhode Island, West Virginia, District of Columbia, New Hampshire, Utah, New Mexico, Florida and Pennsylvania. These line-ups plainly represent a back-to-the-farm movement rather than a frontier movement. It is very likely that more industrial workers found a rural haven when they became unemployed than in previous major depressions when the agricultural frontier still existed, for it is much easier to go back to one's family on the natal farm than to make a new beginning in unsettled territory.

VII

In every decade since 1820 the urban population, especially the population of large cities, has increased proportionally faster than

that of the country as a whole. Since 1880 it has increased more in each decade in absolute numbers.

The few cities established before 1810 grew more rapidly than the rest of the country until 1810 but in the decade 1810-1820 their growth was retarded. The rapid growth of cities after 1820 or 1825 is sometimes attributed to foreign immigration. There are no statistics available to measure the growth of native population in the cities, or elsewhere, until 1850, but an analysis of the census of 1850 indicates that after 1840 at the latest, the growth of native population in the cities was at a more rapid rate than in the country. From 1860 to 1880 the native population in cities grew at a faster rate than the foreign urban population, and again in 1890-1900. In every decade since 1860 the absolute growth of the native population of cities has greatly exceeded the growth of the foreign urban population.

After 1890 the absolute growth of the native urban population exceeded the absolute growth of the native rural population. Although these facts suggest, they do not prove the existence of migration from the rural districts to the cities, because they might conceivably have been the result of natural growth, reinforced by the age distribution of the city population and the greater fecundity of foreign women, whose children, of course, were counted as natives.

But after 1860 (more likely after 1865) the number of interstate native migrants increased in the cities more rapidly than in the country, and after 1880 the number of interstate native migrants in the cities increased at a more rapid rate than the total native population of the cities. This is real proof that after 1880 at the latest the cities were a magnet to native migrants, not a source of emigration. It is proof that the number of rural natives who expected to be able to obtain higher real incomes in the cities exceeded the number of urban natives who expected to be able to do better in the rural districts. It is therefore inconsistent with the assumption that the existence of opportunities on the frontier gave industrial laborers more bargaining power and had an effect in raising their wages. On the contrary, the existence of urban opportunities for natives explains their willingness after the Civil War to permit foreigners to take the unoccupied lands of Michigan,

Wisconsin, Minnesota, The Dakotas, Nebraska, Montana, Idaho, Washington, Utah, Nevada, Arizona, and California. It also largely explains why ten frontier states¹⁸ that formerly received native migrants ceased to do so on net balance before 1880, and six eastern states¹⁹ that formerly had sent out migrants began to receive them on balance before 1880.

Table III shows the increase in urban population, urban native population, and urban interstate immigrant population from 1790 to 1910, with the corresponding rates of increase for the urban and rural districts taken together. Because of changes in the census' method of presenting statistics for cities it is necessary to present figures for groups of varying sizes and to present many of the rates of growth as ranges instead of single figures.

The census of 1910 shows that the urban population was more largely composed of interstate migrants than the rural, in every section of the United States, and in every state except New Hampshire, Massachusetts, Connecticut, Michigan, Montana and Wyoming. Even in these states the urban population contained a smaller proportion than the rural of natives of the state; the apparent inconsistency is caused by the large number of foreign immigrants. The outstaters showed more inclination to reside in urban communities than the "native sons" in every state without exception. The same preference for the cities was shown in 1900 in every state that had cities, except Michigan, Louisiana, and California. It had been manifested in 1890 or earlier in Ohio, Illinois, Indiana, Minnesota, Iowa, Kansas, Nebraska, Arkansas, Colorado and Utah. In fact the tendency was apparent in Ohio and Illinois before the Civil War.

The location of natives residing outside of their native states, as reported by successive censuses, and presented in Table II-C, showed that after 1880 less than half of the net increase in their numbers occurred in rural districts of the frontier states. Part C of Table III also indicates that in the United States as a whole internal migration has been largely a movement to cities since 1860, since the increase in interstate migrants in the cities for which figures are available has been at a higher rate than in the country

¹⁸ Ohio, Ind., Ill., Mich., Wis., Ia., Mo., Ala., Miss. and La.

¹⁹ N. H., Mass., R. I., Conn., N. J., and Va.

TABLE III-A
GROWTH OF CITIES
(Total Population)

DECADE ENDING	NO. OF CITIES	INCREASE IN POPULATION	% INCREASE	% INCREASE WHOLE U. S.
1800	13	71,793	51.1	35.1
	6 ^b	79,401	60.4	
1810	20	114,335	48.8	36.4
	11 ^b	106,047+	42.2+	
1820	26	113,827	30.0	33.1
	13 ^b	102,215+	27.4+	
1830	33	274,120	53.7	33.5
	26 ^b	275,374+	49.3+	
1840	39	443,933	55.2	32.7
	44 ^b	445,485-589,485	44.2-68.1	
1850	50 ^a	1,070,486	73.3	35.9
	66	1,100,292	71.3	
	85 ^b	1,118,000-1,443,000	62.7-99.3	
1860	50 ^a	1,544,858	61.0	35.6
	141 ^b	1,727,000-2,174,000	51.6-75.1	
1870	50 ^a	1,699,657	41.7	26.6
	226 ^b	2,320,000-2,999,000	40.3-59.1	
1880	50 ^a	2,018,125	34.9	26.0
	285 ^b	2,823,000-3,294,000	33.0-40.8	
	580 ^c	3,320,548-3,618,233	34.5-37.6	
1890	50 ^a	3,504,245	45.0	25.5
	160 ^d	4,928,937	49.5	
	445 ^b	5,598,541-6,878,541	49.2-60.5	
	1507 ^e	7,180,000-7,950,000	46.2-53.8	
1900	50 ^a	3,949,798	34.9	20.7
	160 ^d	4,838,057	32.5	
	547 ^b	5,958,096-6,774,096	32.7-41.5	
	1891 ^e	7,117,000-8,077,000	30.1-35.5	
1910	50 ^a	5,054,191	33.3	21.0
	107 ^f	6,299,821	34.9	
	768 ^b	8,793,999-10,561,999	35.1-42.2	
	2402 ^e	10,000,000-11,820,000	33.2-38.4	

^a 50 largest cities at each census, compared with 50 largest at previous census.

^b All cities over 8000 at end of decade.

^c All cities over 4000 in 1880 compared with same cities in 1870.

^d All cities over 25,000 in 1900.

^e All places over 2500 at end of decade.

^f All cities over 50,000 in 1910 that were over 25,000 in 1900.

TABLE III-B
GROWTH OF CITIES
(Natives of U. S.)

DECADE ENDING	NO. OF CITIES	INCREASE IN NUMBER	RATE OF INCREASE	RATE OF INCREASE IN WHOLE U. S.
			%	%
1850 ^{a, b}	29	(287,072+)	(29.4+)	(21.7+)
1860	8 (incl. slaves)	470,181	48.6	30.6
	25 (incl. slaves)	588,397	44.1	
1870	8	581,905	40.4	20.8
	40	1,678,861	87.9	
1880	50	1,655,706	43.4	31.8
	45	1,626,514	44.2	
	580	3,129,227	47.1	
1890	50	2,279,310	41.7	23.5
1900	124	3,878,758	39.9	22.3
	1891	5,923,427-6,883,427	32.9-40.4	
1910	107	4,355,503	32.9	19.5
	2402	7,615,000-8,893,000	30.1-37.1	

^a Free population only.

^b In 1850 natives of U. S. were 90.4% of the total population; in 29 cities they were 64.3% of the total population.

TABLE III-C
GROWTH OF CITIES
(Natives of Other States)

DECADE ENDING	NO. OF CITIES	INCREASE IN NUMBER	RATE OF INCREASE	RATE OF INCREASE IN WHOLE U. S.
			%	%
1850 ^{a, b}	29	—	—	—
1860	8	54,990 ^a	30.0 ^a	35.8 ^a
1870	8	88,430 ^a -105,575 ^d	34.6 ^a -44.3 ^d	32.7 ^d
1880	45	282,034	39.2	25.3
1890	50	591,248	54.7	15.7
1900	124	893,631	40.1	21.8
1910	107	1,116,814	36.0	25.2

^a Free population only.

^b Natives of other states were 13.4 per cent of the total free population in 29 cities; the national average was 14.0 per cent.

^c Assuming all slaves from other states in 1860.

^d Assuming all slaves natives of state in 1860.

as a whole. If all natives are considered, figures are available for a larger number of cities, and Part B shows that cities have grown faster than the rest of the country in native population since 1850.

Finally, considering the total population, cities have grown faster than the rest of the country in every decade since 1820, in spite of the well-known tendency for urban birth rates to be lower than rural.

The figures prove beyond all possibility of doubt that the relative attraction of the city has been greater than that of the frontier in the United States since 1840 or earlier. Since, however, the population was predominantly rural a century ago it was not until the decade of the 80's that the absolute growth in urban areas (native and foreign together) exceeded the absolute growth in rural areas, and not until the decade of the 90's that that became true of the native population by itself.

VIII

If the opportunity to better one's condition by moving to the agricultural frontier has been an important factor in keeping up the wages of industrial laborers one would expect that a considerable proportion of the urban natives would have taken advantage of that opportunity. If that had happened it could be traced from the census figures, for the population of the agricultural frontier would have increased faster than that of the cities. But after 1840 it did not do so. The agricultural lands of the frontier states were quickly settled and in most of them their rate of growth fell back to the national average, showing that they were no longer attractive to immigrants from other districts. Nearly all of the states that continued to grow rapidly after 1890 contained industrial cities and their growth was mainly in those cities or their suburbs.

It would be more nearly correct to say that the opportunity to better one's condition by moving to the city has been an important factor in keeping up the income of rural laborers, especially after 1890. The industrial areas have furnished an outlet for the surplus rural population. The proportion of the total gainfully employed in the nation who were gainfully employed in agriculture fell at a very steady rate, from about 69 per cent in 1840 to about 21 per cent in 1930.

It is apparent that since 1850 the free lands of the West have been more of a safety valve for Europeans and for farmers from the older states than for native industrial workers. The desirable

lands in Vermont, Maine, Kentucky and Tennessee were taken before 1850. Those in Ohio, Indiana, Alabama, and Mississippi had gone by 1860. The states south of the Mason and Dixon line and east of the Rio Grande were dominated by slaveholders before the Civil War, and were not attractive to free white laborers or farmers from the North. Whether the public lands of the northern states were settled to a perceptible extent by former city laborers before 1850 cannot be definitely ascertained from the census. But those northern and western states that were mainly settled after that date were all, except Iowa, Kansas, Oregon, Colorado and Oklahoma, very largely settled by foreigners, and all of them received fewer immigrants from the industrial states than from the agricultural ones.

The recorded birthplaces of natives in 1850, 1880, 1910, and presumably other census years shows that, as compared with natives of agricultural states, the natives of industrial states were less apt to migrate, and those who migrated were less apt to go to the West, and those who went to the West were less apt to settle in rural districts.

In still another way the frontier raised the American standard of living, by permitting a more rapid growth of population and thereby hastening the introduction of mass production in industry. But since that is now accomplished the disappearance of the frontier does not involve a backward step, for it does not involve a reduction in the population. Now that it is no longer necessary to devote our energies to occupying new land we shall have more opportunity to develop the resources that we have. We are still a thinly settled country, by European standards, and our industrial resources, especially in the South, have not been fully developed. The capital and labor formerly devoted to construction of farm buildings and railroads can now be turned toward the production of comforts and luxuries for the masses.

We should not forget that certain European countries, notably Great Britain and Sweden, enjoyed advances in their standards of living relatively as great as that in the United States or nearly so, although they had no frontiers.²⁰ Also other countries with

²⁰ Cf. author's article "Real Wages of Artisans in London, 1729-1935," in *Journal of Amer. Stat. Assoc.*, Vol. XXXI, p. 81, and references therein. See also testimony of T. J. Kreps before TNEC, Apr. 8, 1940, and exhibits 2443 and 2444 submitted by him.

extensive frontiers, Russia and Brazil and China, did not advance in prosperity at such a rapid rate. It was not the area of unsettled land that counted; it was the system of government and the initiative of the citizens.

In the 40 years after 1890, when the agricultural frontier here lost its importance, the rate of increase in the per capita national income (adjusted for changes in the price level)²¹ and in the purchasing power of laborers' wages²² was more rapid than it was in the 40 years before. And the rate of improvement was greatest from 1920 to 1930 while the rural farm population was actually falling. Moreover there is reason to believe that the national income was more evenly distributed in 1930 and 1920 than in 1890 or 1870.²³

Whether or not the population continues to expand in numbers it can continue to expand in its production and consumption. The limits to that sort of expansion are not territorial but psychological. They cannot be laid down in advance, on the basis of a study of history, for no country or age in the past has opened up such vistas of possible achievement. The industrial frontier has been the main field of our advance for 50 years or more. The agricultural frontier is a memory, but the industrial frontier is an actuality, and it offers to us more hope for a prosperous future than the agricultural frontier ever did.

The agricultural frontier, developed by individual enterprise, enabled us to increase our population; the industrial frontier, also developed by individual enterprise, has enabled us to increase our standards of living, and can continue to do so if individual enterprise is not deterred by repressive legislation and oppressive taxation. Future historians will record whether our government has given private enterprise the chance it needs and deserves.

²¹ Based on estimates by National Industrial Conference Board, *National Income in the United States, 1799-1938*, tables 1 & 2.

²² Based on author's indexes of real wages, published in *Review of Economic Statistics*, Feb. 15, 1934, pp. 26, 27.

²³ Cf. author's article "The Distribution of Income among Income Taxpayers in the U. S.," in *Quart. Journ. Econ.*, Aug., 1938.

POPULATION AND THE PATTERN OF UNEMPLOYMENT IN THE SOUTHEAST,

1930-1937

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It may be of some significance that unemployment and the South have both been nominated as United States' "Economic Problem Number One." In the current discussion of regional economics the problem of unemployment has not been directly related to the difficulties of the Southeast.² This neglect apparently stands in sharp contrast to the emphasis on population trends as a factor in the region's economic conditions. It is reasonable to suppose, however, that in the Southeast as in the nation reciprocal relations have arisen during depression between population increases and increased unemployment. Thus although the depression came in a period of falling births, it nevertheless occurred during a period of large increments in the population of working age, 15-74. As T. J. Woofter has shown, numbers in these ages may be expected to increase until 1950. On the other hand prolonged unemployment itself will no doubt further retard births and thus finally reduce numbers in the employable ages.

In this connection it should be of value to trace the pattern of employment in the Southeast as it changed during the depression. For this purpose we can make use of the regular Census of Unemployment taken in 1930 and the Enumerative Check Census taken in connection with the Special Census of Unemployment in 1937.³

¹ From the Study of the Southern People, a Project of the Institute for Research in Social Science, University of North Carolina.

² The Southeast here includes the 11 states delimited in Howard W. Odum, *The Southern Regions of the United States*.

³ John D. Biggers, *Census of Partial Employment, Unemployment and Occupations*, Vol. IV. *The Enumerative Check Census*. By Calvert L. Dedrick and Morris H. Hansen. Washington, Government Printing Office, 1938.

Reduction of the 2 censuses to a comparable basis makes it possible to trace the developing pattern of the employed, the unemployed, and those unavailable for employment from April 1, 1930 to November 1, 1937. Since the Enumerative Check Census gives percentages in these functional classes only by census divisions, we had to recompute them for the Southeast.⁴ Elsewhere we have pointed out our reasons for accepting the Enumerative Check Census as reliable and have discussed the methods involved in reducing the two enumerations to a comparable basis.⁵

TABLE I
ESTIMATED POPULATION 15 TO 74 YEARS OF AGE BY FUNCTIONAL CLASS AND BY SEX WITH
PER CENT DISTRIBUTION, SOUTHEAST, 1937
(All numbers in thousands)

FUNCTIONAL CLASS	ALL		MALES		FEMALES	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Total Population (15-74).....	19,145	100.0	9,495	100.0	9,650	100.0
Employed or Available for Employment..	10,948	57.2	8,058	84.9	2,890	30.0
I. Unemployed.....	1,992	10.4	1,250	13.2	742	7.7
Totally Unemployed.....	1,622	8.5	963	10.2	659	6.8
Emergency Workers.....	370	1.9	287	3.0	83	0.9
II. Employed.....	8,956	46.8	6,808	71.7	2,148	22.3
Partly Unemployed.....	1,126	5.9	788	8.3	338	3.5
Part-time Workers.....	266	1.4	180	1.9	86	0.9
Fully Employed.....	7,422	38.8	5,764	60.7	1,658	17.2
Ill or Voluntarily Idle.....	142	0.7	76	0.8	66	0.7
Not Available for Employment.....	8,197	42.8	1,437	15.1	6,760	70.0

Note: The group "Partly Unemployed" has been added here to the Employed according to the procedure most frequently used by the Census of Unemployment for comparison of the groups.

Source: *United States Census of Partial Employment, Unemployment, and Occupations, 1937*: Vol. I, Table 20; Vol. IV, Tables 43, 54, 55, 56.

The Special Census indicates that in 1937 the nation and the region presented a pattern of employment somewhat similar (Table I). In both areas out of every 10 men, approximately one was unable to work and 9 were employable. Of these 9 only 6 or 7 could get jobs while 2 or 3 were left unemployed or worked

⁴ See Appendix for methods used.

⁵ "Population and the Pattern of Unemployment, 1930-1937," Milbank Memorial Fund Quarterly, Jan., 1940, pp. 27-43. See pp. 28-29 and Appendix, pp. 40-43.

on W.P.A. and other projects. Of every 10 women, 7 remained at home while 3 sought jobs—two of whom were successful. For the total population, 4 remained at home, 6 sought jobs, but only 4 could find them. Regional-national differences are not important. The Southeast with less total unemployment than the nation, 10.4 to 11.8 per cent, has a slightly higher proportion that is not seeking work, 42.8 to 41.5 per cent. The region and the nation have the same proportion listed as fully employed, namely, 38.8 per cent.

I

The level of income attained in any region depends, among other things, on the amount of employment available. In depression it is realized that a larger fraction of the labor force is wasted, leaving a smaller part of the population to support the whole group. Table II provides estimates designed to show what proportion of the labor force was "wasted" in 1937. Part-time employed and partly unemployed are computed at half-time and the ill and voluntarily idle are counted with the unemployed. Emergency workers although returned with the unemployed are not here regarded as "wasted" man-power. This procedure gives an estimate that between a fifth and a fourth (22.5 per cent) of the region's labor force was wasted in 1937. This is slightly less than the wastage in the nation, 23.8 per cent.

We are also interested in determining what proportion of the group "supports" the total population. This can be estimated by including in our analysis (1) the natural dependents, those too young and too old to work, and (2) those who are not seeking work, those unavailable for gainful employment. Table III shows that in the Southeast 31.0 per cent of the total population are under 15 or over 75 and thus largely dependent, 8.9 per cent are "wasted" man-power, and 29.5 per cent are unavailable. Thus in 1937 the Southeast's population of 27,739,000 was supported by 8,488,000 equivalent full-time workers comprising only 30.6 per cent of the population. This is in contrast to the nation where with 10 per cent of their man-power "wasted," 32 per cent of the population supports the total group. The difference is accounted for by the nation's smaller proportion of natural dependents, 28.2 per cent as compared to 31 per cent for the Southeast.

Traditionally the problem of the support of the total population by the working force has been met in the family. It was the

TABLE II
PER CENT OF TOTAL MAN-POWER AVAILABLE FOR EMPLOYMENT BY FUNCTIONAL CLASS
WITH PER CENT WASTAGE OF MAN-POWER, SOUTHEAST AND UNITED STATES, 1937

FUNCTIONAL CLASS	UNITED STATES		SOUTHEAST	
	Per Cent Man-Power	Per Cent Wastage	Per Cent Man-Power	Per Cent Wastage
Total Available for Employment.....	100.0	23.8	100.0	22.5
Totally Unemployed.....	16.4	16.4	14.8	14.8
Emergency Workers.....	3.8		3.4	
Partly Unemployed.....	10.2	5.1	10.3	5.2
Part-Time Workers.....	2.2	1.1	2.4	1.2
Fully Employed.....	66.2		67.8	
Ill or Voluntarily Idle.....	1.2	1.2	1.3	1.3

Source: *United States Census of Partial Employment, Unemployment, and Occupations, 1937*: Vol. I, Table 20; Vol. IV, Tables 6, 43, 54, 55, 56.

TABLE III
DISTRIBUTION OF POPULATION BY EFFECTIVE MAN-POWER, UNITED STATES AND
SOUTHEAST, 1937
(Estimate in thousands)

POPULATION GROUP	UNITED STATES		SOUTHEAST	
	Number	Per Cent	Number	Per Cent
Total Population.....	129,533*	100.0	27,739*	100.0
Workers (full time).....	41,504	32.0	8,488	30.6
Dependent.....	88,029	68.0	19,251	69.4
Wasted.....	12,970	10.0	2,460	8.9
Not Available:				
15-74 yrs.....	38,589	29.8	8,197	29.5
Under 15 and Over 75.....	36,470	28.2	8,594	31.0

* Corrected estimates of the United States Census Bureau for 1937, estimates for the United States as of Nov. 1, for the Southeast as of July 1; all other estimates are based on data from Tables I and II, and are derived from the *United States Census of Partial Employment, Unemployment, and Occupations*.

A similar computation for white females of the Southeast shows that 12.4 per cent of white females are working full time, while 87.6 per cent are dependent.

family group which supported the unemployed and those unavailable for employment along with the natural dependents. In-

creasing economic insecurity has operated to shift the support of the unemployed and the aged from the private to the public sphere. Important in this connection are those not seeking gainful employment, the unavailables. In the Southeast in 1937 they amounted to something over 8,000,000 (Table I). For any number of this group to seek work and fail to find it will add to the region's total of unemployment.

II

With these considerations in mind, we shall attempt to trace in the Southeast the change in numbers of workers by the 3 functional classes, the employed, the unemployed, and those unavailable for employment. Any increase in unemployment from one period to another may be traced to (1) increases in the population of employable ages, (2) lost jobs, or (3) increased proportions of job seekers. Those who lose jobs may be regarded as the primary unemployed, while the increased proportions entering the labor market may be called the secondary unemployed.

In order to separate the population factor (1) from the social-economic factors (2 and 3) we have reduced the two censuses to a comparable basis and computed the differences due only to population change for each functional class. Thus to ascertain changes in the number of unemployed due to change in age-sex group composition, we computed the 1930 age specific unemployment rates for each five-year age group, male and female 15-74, and applied these rates to the 1937 population distribution. The summation of these figures gives us the amount of unemployment we should expect with the 1930 employment pattern held constant.⁶

The results of this analysis for the 3 functional classes are shown in Table IV and Figure 1. The first two rows show the adjusted number of workers in 1930 and 1937. The actual difference between the 2 sets of figures (third row) is due to the 2 factors: (1) change in number and composition of the population and, (2) change in social-economic conditions. In order to separate the effects of these 2 factors we have computed the total difference due

⁶ The method involves the same principle used in computing the standardized death rate. For further explanation of method see the reference to Milbank Memorial Fund *Quarterly*, Jan., 1940, pp. 32-43.

TABLE IV
COMPARISON OF NUMBER OF WORKERS BY SEX AND FUNCTIONAL CLASS IN THE SOUTHEAST IN 1930 AND IN 1937
(All Numbers in Thousands)

ITEM	TOTAL POPULATION AGED 15-74									
	Total Population Aged 15-74		Employed or Available for Employment						Unavailable for Employment	
	1 (equals 2 - 5)		Total		Totally Unemployed		Employed (Fully or Partly)		5	
	2 (equals 3 - 5)		3 (equals 3 - 4)		3		4		5	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
A. All										
1. Number in 1937.....	19,145	100.0	10,944	57.2	1,988	10.4	8,956	46.8	8,201	42.8
2. Number in 1930.....	16,307	100.0	8,493	52.1	253	1.6	8,240	50.5	7,814	47.9
3. Exp. Number in 1937*.....	19,145	100.0	10,017		296		9,721		9,128	
4. Total Difference (1 - 2).....	2,838		2,451		1,735		716		387	
5. (a) Difference due to Increase of Population (3 - 2).....	2,838		1,524		43		1,481		1,314	
6. (b) Difference due to Change of Social-Economic Conditions (1 - 3).....	0		927		1,692		-765		-927	
B. Male										
1. Number in 1937.....	9,495	100.0	8,077	85.1	1,269	13.4	6,808	71.7	1,418	14.9
2. Number in 1930.....	8,088	100.0	6,662	82.4	196	2.4	6,466	79.9	1,426	17.6
3. Exp. Number in 1937*.....	9,495		7,884		230		7,654		1,611	

4. Total Difference (1 - 2).....	1,407	1,415	1,073	342	-8
5. (a) Difference due to Increase of Population (3 - 2).....	1,407	1,222	34	1,188	185
6. (b) Difference due to Change in Social-Economic Conditions (1 - 3).....	0	193	1,039	-846	-193
C. Female					
1. Number in 1937.....	9,650	2,867	29.7	2,148	22.2
2. Number in 1930.....	8,219	1,831	22.3	1,774	21.6
3. Exp. Number in 1937*.....	9,650	2,133	66	2,067	7.5
4. Total Difference (1 - 2).....	1,431	1,036	662	374	0.7
5. (a) Difference due to Increase of Population (3 - 2).....	1,431	302	9	293	77.7
6. (b) Difference due to Change in Social-Economic Conditions (1 - 3).....	0	734	653	81	395
					1,129
					-734

* Conditions as of 1930.

Note: Number of workers in 1937 and 1930 adjusted for comparable definitions; employed workers include those defined in 1937 as fully employed, partly unemployed, part-time workers, and ill or voluntarily idle; unemployed include totally unemployed and emergency workers in 1937, and unemployed of class A in 1930. Due to the adjustments for comparable definitions there is a difference between figures for 1937 given here and in Table I.

Source: *Fifteenth Census of the United States, 1930, Population*, Vol. V, chap. 4, Tables 15 and 16; Vol. IV, Tables 11 and 23. *United States Census of Unemployment, 1937*, Vol. I, Table 20; Vol. IV, Tables 43, 54-56, Table 49, p. 111. *United States Census of Unemployment, 1930*, Vol. I, Table 18.

to change in population. Thus (column 3) the number of unemployed "expected" in 1937 was 296,000. Since the total number of unemployed in the Southeast in 1930 was 253,000 (see second horizontal line), the increase due only to change in population is shown to be 43,000. The actual increase in unemployed persons, however, was 1,735,000—representing the combined effect of population and social-economic changes. The net difference in unemployment which can be attributed to change in social-

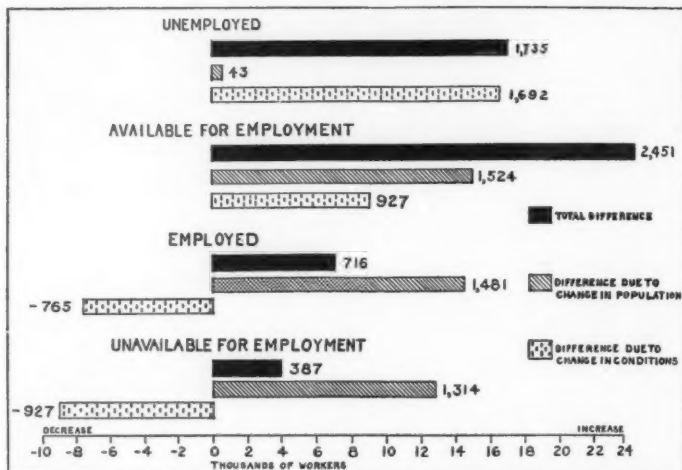


FIG. 1. DIFFERENCE IN NUMBER OF WORKERS OF BOTH SEXES BETWEEN 1937 AND 1930 IN THE SOUTHEAST SHOWING TWO COMPONENTS: (a) DIFFERENCE DUE TO CHANGE IN POPULATION; (b) DIFFERENCE DUE TO CHANGE IN SOCIAL-ECONOMIC CONDITIONS

economic conditions alone is this figure minus the 43,000 population increase or 1,692,000.

On the other hand (see Figure 1) the total surplus of workers "available for employment" (category 2) of both sexes, or 2,451,000, was created almost equally by the effect of changed population (1,524,000)⁷ and changed conditions (927,000). Analyzing this change in "total workers available" by sex we see that most of the increase in male job seekers was due simply to increased popula-

⁷ Of this 2,451,000 increased population, it would appear that (category 4) 716,000 got jobs.

tion (1,222,000) while the increase in female job seekers (1,036,000) is explained by changed conditions (734,000) rather than population changes (302,000).

Table IV and Figure 2 give an answer to the second question: how much of the unemployment in 1937 was due to loss of jobs and how much to an increase in the number of workers by various classes. Thus we see that the net increase in unemployed males was 1,039,000 and that it was mainly due to the loss of jobs which amounted to 846,000. The increase of 653,000 in the number of

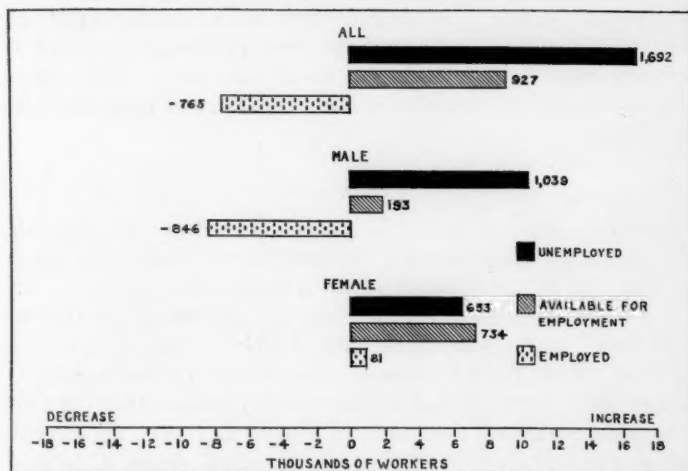


FIG. 2. DIFFERENCE BETWEEN ACTUAL NUMBER OF WORKERS IN 1937 AND NUMBER EXPECTED ACCORDING TO THE PATTERN OF DISTRIBUTION BY FUNCTIONAL CLASS, SOUTHEAST

unemployed women, however, was caused exclusively by the great increase in job seekers among women (734,000), for the number of jobs for women actually increased by 81,000. Obviously then the employment status of the total population reflects the combined effects of both factors. Thus the increase of 1,692,000 unemployed in the Southeast is explained by a loss of 765,000 jobs and by an increase of 927,000 job seekers—734,000 of whom were women.

Evidently while the depression served to increase reported un-

employment it operated for each sex in an entirely different fashion. As in the nation, increased male unemployment sprang chiefly from lost jobs; female unemployment from an increase in the proportion of job seekers. It is inaccurate, however, to deny that the increase of unemployed women is due to the loss of jobs. It is due to the loss of jobs by men—not by women. Loss of jobs by primary workers with its lowering of the levels of family living has sent streams of secondary workers, composed largely of women, into the labor market. From our study of the effective labor force, we should expect unemployment to have this dual effect on our society. As unemployment decreases the size of the effective labor force supporting the total population, additional numbers must embark upon the search for work. Since most men are already employed or seeking employment this task falls on women.

III

Secondary workers have also been drawn from the region's reservoir of maturing youth. The movement is made clear when the changing pattern of employment is studied in connection with the population pyramid. From 1930 to 1937 the proportion of "available" workers increased most sharply in the younger ages 15 to 30. Thus Table V indicates that in ages 15-19 the proportion of males working and seeking work increased from 34.5 to 48.7 per cent; among females from 15.8 to 24.6 per cent. After age 30 the employment pattern of the sexes shows a decided differentiation. The proportion of males in the labor market becomes stable at this age and shows slight decline thereafter. Females, however, continue to flow into the labor market until age 60. The effect of old age security measures may be seen in the decline of workers available after 65. For males 65-69 the decline was from 82.4 to 74.0 per cent. Regional trends follow national trends in this respect.

Figure 3, which presents the population pyramid in terms of the 3 functional classes in the Southeast—1937, indicates that the conflicting claims of "unemployed" and "unavailable for employment" are specially apparent in the younger ages and among females. As women attain the age of marriage and mature

TABLE V
AVAILABLE WORKERS AS PERCENTAGES OF TOTAL POPULATION IN EACH AGE GROUP IN THE
SOUTHEAST, 1930 AND 1937¹

AGE	MALE		FEMALE	
	1930	1937	1930	1937
15-19	34.5	48.7	15.8	24.6
20-24	82.2	89.1	29.3	43.3
25-29	94.1	96.6	26.1	39.5
30-34	96.1	96.7	23.3	33.4
35-39	96.5	96.4	23.8	31.4
40-44	97.1	95.8	22.9	29.4
45-49	97.0	95.6	22.5	25.3
50-54	96.2	94.4	21.3	22.6
55-59	94.4	92.0	18.5	19.8
60-64	90.2	85.9	17.6	17.2
65-69	82.4	75.3	14.3	12.4
70-74	68.3	48.6	10.1	5.7

¹ Adjusted to a comparable definition. "Available workers" include both job holders and job seekers.

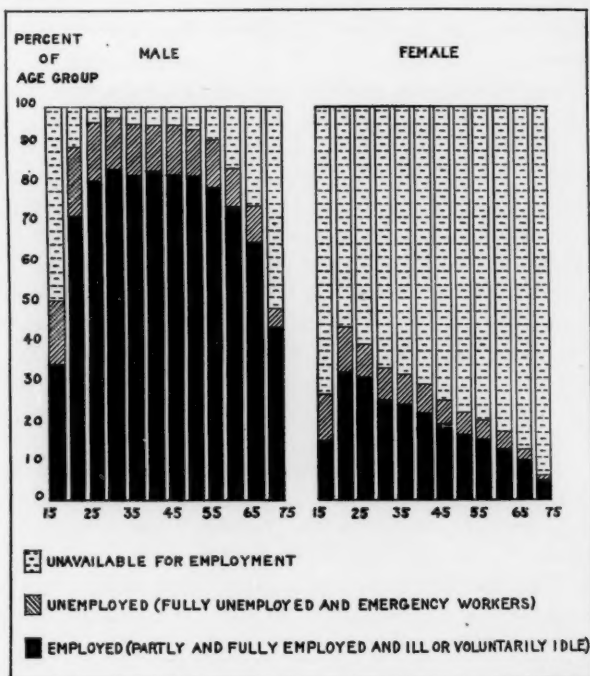


FIG. 3. PER CENT DISTRIBUTION OF MALE AND FEMALE POPULATION 15-74 YEARS OF AGE WITHIN EACH 5-YEAR AGE GROUP BY FUNCTIONAL CLASS SOUTHEAST, 1937

homemaking, their proportions in the labor market decline. Only among women in the age group 20-24 are more than two-fifths (43.3 per cent) in the labor market. It is noted that by far the sexes' highest rate of unemployment (11.6 per cent) is found among women of younger ages, 15-24.

IV

Our Table IV, Figure 2, shows that a loss of 765,000 jobs in 1937 due to a change in social-economic conditions was accompanied by an increase of 1,692,000 among the unemployed of both sexes. This is equivalent to the statement that when a hundred jobs are lost in the population of the Southeast, 1930-1937, we may expect to find thereby not 100 but 221 unemployed. The same comparison for the United States gave a much smaller ratio. Here every 100 jobs lost meant only 176 unemployed.⁸

Analysis by sexes in Figure 2 helps to show further differences significant for the Southeast. Thus for males in the nation the loss of 4.9 million jobs, a decrease of 14.2 per cent, was accompanied by a net increase of only 6.3 per cent (398,000) in the number of job seekers. In the Southeast, however, 12.9 per cent loss of jobs among males (846,000) was accompanied by a net increase of 193,000 job seekers—an increase of 13.1 per cent. This represents twice the ratio found in the nation. Among females there was no net loss of jobs for 1930-1937 in either the nation or the region. The contrast, however, again indicated economic pressure in the Southeast. Among women in the nation a net increase of 1.8 per cent in jobs (176,000) was accompanied by a 31.6 per cent increase (3,233,000) in job seekers. In the Southeast a net increase of 4.4 per cent in jobs for women (81,000) was accompanied by an increase of 39 per cent (734,000) in female job seekers. These higher ratios of secondary unemployment found among both males and females in the Southeast must reflect a greater economic pressure found in the region. Lower incomes and smaller savings among the region's families mean that loss of jobs by any of its members leads to a greater threat of destitution and thus to a more intensive search for jobs by secondary workers, women and youth.

⁸ See Milbank Memorial Fund *Quarterly*, *loc. cit.*, pp. 34-36, 38.

V

The 1937 census makes it possible to compare rates of employment on farms and in rural nonfarm and urban areas. It is generally realized that the movement of families from the farm to the urban environment serves to increase the proportions of those seeking gainful employment. The census technicality whereby unpaid family labor on the farm is classified among those "unavailable for gainful employment" is partly responsible for this condition. Such unpaid labor contributes to the store of goods and services and by increasing the family income, no doubt, receives added payment in kind instead of in wages.

The large proportion of the South's labor force engaged in agriculture makes for significant regional-national differences here. In both the nation and the region the proportions in the labor market increase as we move from rural farm to village (rural nonfarm) to urban areas. Roughly speaking only half of the rural farm population age 15-74 have or seek jobs, as compared to some 55 per cent of rural nonfarm and over 60 per cent of urban population. Significantly enough when the nation is compared with the region it is found that the Southeast has a greater percentage of full and partial unemployment on the farms, 15.0 per cent as compared to 11.2 per cent for the nation; a smaller proportion of total unemployment in rural nonfarm areas, 11.4 to 13 per cent; and an almost equal ratio in cities, 12.4 to 12.6 per cent. With due consideration of the difficulty involved in the concept "unemployed farmer," the region's higher ratio of farm unemployment indicates the difficulties facing agriculture in the Southeast in 1937.

The pattern of racial employment shows important differences as between the Southeast and the nation. In both areas more Negroes than whites are forced to seek jobs and more are unemployed. In the nation, however, Negroes show a much higher rate of unemployment than in the Southeast. For Negro males this difference amounts to 22.5 per cent unemployed in the nation as compared to only 14.1 per cent in Southeast; for females the ratio is 16.1 to 10.2 per cent unemployed in favor of the region. Comparably Negroes in the nation furnish a higher ratio of

emergency workers, 5.8 per cent for males in the nation as compared to 2.7 per cent in the region.

VI

Unemployment is undoubtedly a serious problem in the region, but it is possible to conclude from this study that the position of the Southeast as "Economic Problem Number One" does not arise from greater unemployment than that existing in the nation. Throughout the depression period under study unemployment has been lower in the Southeast, a fact which holds true for Negroes as well as whites. On the surface it would seem that less manpower is "wasted" in the Southeast, but that the total population is supported by a smaller proportion gainfully employed as a working force. The load of dependents is 2.7 per worker in the Southeast as compared to 2.3 in the nation. This is in accordance with both the region's greater proportion of children and its smaller proportion "available" for gainful employment. When analyzed this last trend can be traced to the large group of rural farm women and youth who serve as "unpaid family workers on the home farm."

The situation would indicate that compared to the nation the South suffers from low productivity and accompanying low wages rather than from greater unemployment. This low level may account for the larger proportions who become job seekers as soon as the breadwinner of the family loses work. Thus from 1930 to 1937, allowing for population growth, the loss of 100 jobs gave the nation 176 unemployed, but for the region it meant 221 unemployed. In one economic sector, moreover, the Southeast failed to hold its favorable employment ratio. By 1937 the emerging agricultural problem had served to give the region a higher rate of farm unemployment than was found in the nation. This conclusion fits in with other studies which show that undoubtedly the problem of unemployed rural youth and of displaced tenants has attained serious proportions in the region.

The comparison of total unemployment in the Southeast in 1930 and 1937 (1.6 per cent as against 10.4 per cent) makes the return of 1930 conditions seem a desirable goal. To reproduce the 1930 employment pattern in the Southeast with allowance for

increase in the population would require drastic changes. Our figures show that we would first have to induce 927,000 persons to relinquish jobs or the search for jobs and return to the ranks of those unavailable for employment. Then we would have to provide 846,000 new jobs for men and take away 81,000 jobs from women workers. Such an arbitrary shifting of workers could scarcely be expected to function in a democratic country. Another way, accordingly, would be to accept the increase in the number of those available for employment, that is, this new group of 927,000 seeking or holding jobs. Here in order to return to the low ratio of unemployment in 1930, we would have to provide 653,000 additional jobs for women and 1,039,000 jobs for men. The solution, when it arrives, will probably lie somewhere between these two extremes.

APPENDIX

Source and Method. The so-called Check Census (Volume IV of the Census of Unemployment of 1937) gives completeness of registration and percentages of persons in various functional classes only by census divisions, not by states or regions. The absence of these data for separate states presented a serious obstacle for our regional estimate. Another difficulty was the absence of an official estimate of the population in 1937 by age and sex groups for individual states.

To solve the problem of regional percentages meant dividing the states of the Southeast into 2 groups: the 5 states comprised in the South Atlantic Division combined together were assumed to follow the pattern by functional classes as given in the census for the whole division. The remaining 6 states were Kentucky, Tennessee, Alabama, Mississippi, Arkansas, and Louisiana. Four of them form the East South Central Division. These 4 states plus Arkansas and Louisiana as a group were assumed to follow the pattern computed by the census for the East South Central Division. This assumption was based on the fact that Arkansas and Louisiana are very close to the other southeastern states and, consequently, to the 4 states of the East South Central Division with regard to social and economic conditions.⁹

⁹ Howard W. Odum, *Southern Regions of the United States*, p. 8.

The first assumption (with regard to the South Atlantic Division) is not justified on the same basis, since this division is far from being homogeneous. Our justification in this case is the fact that the 5 southeastern states added together comprise about 75 per cent of the total population of the division, and that, of the remaining 25 per cent, a very large part is the population of West Virginia, which, though different in many respects from the Southeast, is probably much closer to the Southeast than to the 3 other areas—District of Columbia, Maryland and Delaware.

Moreover, as can be easily demonstrated, the influence of these 3 areas on percentages of unemployment for the whole division works in 2 opposite directions making the errors in the estimates of percentages for the separate classes in the Southeast to a large extent self-compensating. For the total population of the Southeast, however, a certain overestimate is to be expected.

Method of Computation. Omitting details of the computation, we shall only give a brief summary of the method used.¹⁰ As mentioned above, it was necessary to compute the figures for the 2 subgroups of states separately and then combine the results to obtain totals for the Southeast. Estimates for the male population of the 5 states entering the South Atlantic Division may serve as an illustration. Using the data of the Voluntary Census we added together the number of persons in each of the 3 groups of unemployed (totally unemployed, emergency workers, and partly unemployed) given for the males of the 5 states for each age-group. Next, each of the numbers by age-group and category of unemployment had to be divided by the respective percentage of completeness of registration as computed for the South Atlantic Division. This gives the corrected number of the male unemployed by age and category. After this, we added the 3 categories of unemployed for each age-group and divided these numbers by the percentage of unemployment given for these 3 groups combined for the South Atlantic Division. The result gives the total male population of the 5 states by quinquennial age-groups. Having thus estimated the population, we could find the number of males in the other functional classes (fully employed, part-time

¹⁰ *Census of Partial Employment, Unemployment, and Occupations, 1937*, Vol. IV, Appendix B. Our method was a combination of the two methods presented by the census.

workers, etc.) simply by applying percentages given by the Check Census for the remaining classes by age-group.

For the female population, the completeness of registration is considerably lower than for males, and the estimates of total female population derived from them require further adjustments on the basis of known age-sex ratios.¹¹ The results by functional class for all age-groups combined are given in Table I. The total estimated population of the Southeast between the age of 15 to 74 inclusive is thus 19,145 thousands; subtracting from this number the 2 last groups, we obtain for the population aged 15-64 an estimate of 18,014 thousands. The estimate of the population between the same ages for July 1, 1937, made by the Social Security Board in cooperation with the Census Bureau and derived from different sources is 17,729 thousands.¹² Our estimate relates to the end of November, 1937, and therefore should be a little higher, but nevertheless is probably an overestimate, as we had anticipated. However, this discrepancy does not seem large enough to affect seriously the general pattern of distribution by functional class and the validity of the conclusions drawn mainly from an analysis of percentage distribution and interrelation of various functional classes.

Adjustment for comparable definition of workers in 1930 and 1937 was made by the procedure used for the United States. To adjust workers in 1937, we had to assume that the percentages of "new" workers and "omitted unemployed" were the same for the Southeast as for the nation. In order to separate the influence of the increase of population from the effect of the social-economic changes a method analogous to the procedure of standardization of death rates was used.¹³

¹¹ *Op. cit.*, Vol. IV, p. 24, compare with discussion for adjustments made for female population of the United States under Method I.

¹² John J. Corson, "Wage Reports for Workers Covered by Federal Old-Age Insurance in 1937," *Social Security Bulletin*, Vol. 2, No. 3, p. 6.

¹³ For similar adjustments made in the case of workers available for employment for the nation as a whole see the *Census of Unemployment*, Vol. IV, p. 112.

THE PASSING OF THE SMALL OIL MAN*

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In the last 30 years the petroleum industry of the Southwest has grown from insignificance to the dominant position of producing nearly three-fourths (73.6 per cent in 1938) of the nation's oil¹. In the six states, Kansas, Oklahoma, Arkansas, Louisiana, Texas, and New Mexico, the industry now is controlled by a few great, vertically-organized companies. Many factors have contributed to cause the numerous small operators of three decades ago to be supplanted by firms of virtually unlimited resources².

In considering this transition it is necessary to give attention to the economic results of the change from boom towns to controlled company camps and unit-pool operations, to the shift from haphazard, shallow holes to scientific, deep wells through the use of engineering technology. Modern methods have succeeded in developing the great natural gas industry from a product that once was wasted in the Southwest. Refining has emerged from the relatively simple distillation to the much more efficient cracking process. Two factors that have developed parallel to vertical organization have been pipe-line transportation and company retailing. Proration, the limiting of production, has been the most profound recent change in the oil industry.

Outstanding among the early features of the industry was the boom oil town, where those engaged in the wild scramble to capture the petroleum were just as eager to establish new communities. A few months were sufficient for building a town of

* This paper was presented before the Economic Development of the Great Plains Section of the Mississippi Valley Historical Association meeting at Omaha, Neb., May 3, 1940.

¹ Joseph E. Pogue, *Economics of the Petroleum Industry*, (Pamphlet) New York, 1939, p. 6. (Advance printing of chapter of *The Elements of the Petroleum Industry*, E. DeGolyer, ed., American Institute of Mining and Metallurgical Engineers, under Seeley W. Mudd Fund.)

² *Ibid.*, p. 5.

wooden shacks³. Drumright, Oklahoma, was erected along a section line in the heart of the Cushing pool. Later the wooden buildings were replaced by brick ones. Brick buildings did not assure permanence, however, in the case of Stinnett, Texas, for there structures of several stories have been deserted. The desertion of a boom town did not necessarily cause the abandonment of the buildings, for in southwest Texas on several occasions they were loaded aboard trucks and hauled bodily to another oil strike. Hotels, even where the lodgers had to stand in line at the bathroom door, were an imperative necessity⁴. The career of the "wandering hotel" began at Fort Stockton, Texas, as a 40-room structure and ended at Hobbs, New Mexico, where it contained 100 rooms. It had participated in three oil booms and traveled 300 miles. The boom towns were centers of gambling, lawlessness, and high prices, and generally more than a year elapsed before a school system was provided⁵. With the transition of the oil industry to major proportions, there developed a tendency to prevent boom towns. Examples of the controlled type of oil town were Van and Texon, both in Texas⁶. Both these towns were owned by the companies that operated the respective oil pools. These towns simply were company camps (Texon had a population of more than 2000), and the residents lived in more comfort and order than would have been possible in boom towns. The heyday of the boom town era was epitomized by the Burkburnett roustabout in 1920, when on Monday he attempted to account for the \$50 which he had spent on Saturday. "Two dollars for a taxi," he said, "and eighteen dollars for liquor and women. That's twenty. By Joe, I must have squandered the rest!"

While many factors have contributed to the doom of the small oil man, his fate was presaged in 1917 when it was realized in Oklahoma that crude oil could be found in the Ordovician formations, which were older and deeper than the zones previously

³ *The Tulsa World*, Tulsa, Okla., Mar. 24, 1912; *The Oil and Gas Journal*, June 20, 1935, p. 82; *The Drumright Derrick*, Drumright, Okla., Feb. 20, Sept. 25, 1914.

⁴ Grace Gaddis, "Home is Where the Hat Is," *The Texaco Star*, May, 1931, p. 14.

⁵ Sam Ashburn, "School Days in West Texas," *The Texaco Star*, June-July, 1931, pp. 28-29.

⁶ "The Van Unit," *The Pure Oil News*, Mar., 1931, pp. 4-8.

explored⁷. That meant deeper and more expensive drilling, and tended to eliminate those men whose funds had been sufficient for the \$5,000 wells of the Healdton pool⁸. In 1920 an oil well 4,000 feet deep was rare and more unusual was the man who would venture to predict that 7,000 feet was possible. In the 1930's a southern Oklahoma well that reached nearly 9,000 feet indicated that oil-bearing formations might exist at least 10,000 feet deeper⁹. Manufacturers rapidly improved the drilling machinery, so that by 1937 only half of the petroleum requirement of the United States came from formations at 5,000 feet or less, and more than half of the known oil reserves were deeper. Drilling equipment today reaches 10,000 feet with comparative ease, and there are in Texas, Louisiana, and Oklahoma more than 150 wells ranging in depth from 10,000 feet to nearly three miles. The chief hope of discovering more petroleum on the Gulf Coast of Texas and Louisiana lies in deep drilling. Lessors on the Gulf Coast, where the small operators discovered and exploited the shallow salt domes early in the century, now anticipate depths of 10,000 to 12,000 feet¹⁰. Some of the abandoned shallow pools have been leased again and redrilled, for experience has indicated that the deeper oil-bearing formations contain better petroleum and larger amounts. Such indications suggest that in the future petroleum may be produced from deposits 20,000 feet deep, but one such well would require the investment of a respectable fortune. Of course, oil wells still can be drilled with a few thousand dollars, and in the Rio Grande Valley of Texas petroleum is being produced from holes that cost less than \$3,000. Those wells are about 1,500 feet deep, but practical oil men are convinced that few such shallow areas remain. The relatively inexpensive wells attract the small independent producers because the rate of pay-off is more rapid when proration limits production to less than 50 barrels a day¹¹.

⁷ Charles B. Leyendecker, "World's Deepest Well Flows at 11,630 Feet," *The Oil Weekly*, May 17, 1937, pp. 44-46; American Petroleum Institute, *Petroleum Facts and Figures*, 1939, New York, (Sixth edition) p. 67; *The Oil Weekly*, Jan. 6, 1936, p. 44.

⁸ Brad Mills, "Economic Aspects of Deep Drilling are Far Reaching," *The Oil Weekly*, Apr. 12, 1937, pp. 20-22; Interview with Glenn Patchett, Tulsa, Okla., Oct. 28, 1939.

⁹ *The Oil Weekly*, Jan. 6, 1936, pp. 44-45.

¹⁰ Brad Mills, *loc. cit.*, pp. 21-22.

¹¹ Wallace Pratt to Gerald Forbes, Oct. 13, 1939.

In the East Texas pool, the largest oil deposit in the world, because of the relatively soft formations it was possible to drill a well in 10 days, but the average cost of the thousands of wells was about \$25,000. The first well in the Oklahoma City pool cost a total of \$168,000, of which \$85,000 was the expense of drilling alone. Later wells in the Oklahoma City pool cost from \$90,000 to \$125,000 each. Some of the final Oklahoma City wells, through savings in the use of old equipment, cost as little as \$60,000, but the general average was \$100,000¹². Such costly wells were certain to be out of the reach of the small independent petroleum producers.

Another factor that was interlocked with the expense of deep drilling in reducing the importance of the small oil man was the increasing price of drilling machinery. In the 1920's it was possible to purchase a steam-powered rotary drilling rig for about \$20,000, but in 1934 the most up-to-date drilling equipment cost \$100,000 or more¹³. With the improved machinery of 1934 the expense of drilling was no small item, for diesel-electric equipment required from 30 to 40 dollars' worth of fuel oil and 40,000 to 125,000 gallons of water daily. For drilling along the Gulf Coast of Texas and Louisiana, many miles from a land base, one company constructed several steel barges. The barges were equipped with diesel-electric drilling plants that were capable of making a hole 6,000 feet deep. Another company spent \$80,000 in constructing a foundation from which to drill a well in Galveston Bay. Only major companies could bear such expenses¹⁴.

Even if the machinery and drilling were not expensive, in some cases the prices of leases would exclude the little independents. In the Anahuac pool in Texas, the largest salt dome discovery, \$1,000 an acre was paid for leases at the edge of the deposit. At Oklahoma City bonuses of \$300 to \$1000 were paid for leases on single city lots. A leased block of 2,500 acres in the East Texas pool was sold for \$3,500,000, a rate of \$140 an acre. Those prices,

¹² Claude Barrow to Gerald Forbes, Oct. 1, 1939; M. J. Bonham, "Today's Picture of East Texas," *The Conoco Magazine*, May-June, 1932, p. 11.

¹³ *The Texaco Star*, Jan-Feb., 1934, p. 9.

¹⁴ *Ibid.*, p. 8; *The Oil Weekly*, November 2, 1936, p. 61; L. K. Laney, "Floating Power for Drilling Oil Wells," *The Texaco Star*, June-July, 1931, pp. 12-13.

of course, were for leases on proved acreage, but it is not uncommon for farms to command a bonus of \$8,000 in unproved areas¹⁵.

Fluctuations in price have increased the obstacles of the small operators who have engaged in production, a division of the industry that always has been highly competitive. The producer has been caught between the expense of his own operations and his utter inability to control the production of his neighbors. The excessive production resulting from unrestrained drilling in three great pools caused the ruin of many small operators and wasted much crude oil. Anthony F. Lucas drilled his famous Spindletop "geyser" near Beaumont, Texas, in 1901. The wanton production of the Spindletop pool caused the price of petroleum to drop to four cents a barrel. Later came the great pool at Cushing, Oklahoma, in 1912-1915 when competitive drilling produced a flood of petroleum that again swept the price down as low as five cents a barrel. The record low price of two and one-half cents a barrel came in 1931 when a drilling orgy in the East Texas pool completely unbalanced the price structure¹⁶.

The East Texas disaster was not entirely one of broken price but also one of excessive waste by investment in many unnecessary wells. The porosity of the East Texas formation was such that engineers have estimated the maximum recovery of oil could have been gained with about one well to every 20 acres. Such spacing would have required about 6,890 wells. By estimating the wells as costing \$10,000 each, the excess investment in unnecessary holes, resulting from competitive drilling, has been fixed variously from \$85,000,000 to \$160,000,000. At Oklahoma City, where the cost of the wells was about \$100,000 each, competition resulted in at least double the number of holes necessary for properly draining the reservoir. Many of the wells at Oklahoma City and in the East Texas pool never will be profitable, although the large operators will be able to write off the losses. Leaders in the industry argue that despite the more expensive deeper wells the driller must

¹⁵ John F. Camp, "Improved Logging, Testing and Completing a Feature of Deeper South Texas Drilling," *The Oil Weekly*, Sept. 28, 1936, p. 37; Charles B. Leyendecker, "A Trip to Anahuac," *The Oil Weekly*, Mar. 22, 1937, p. 37.

¹⁶ "The Oil Situation as Seen by William R. Boyd, Jr.," *The Pure Oil News*, Nov., 1931, pp. 4-5.

reduce costs by eliminating unnecessary wells and by gaining the maximum recovery at the minimum outlay of capital¹⁷.

Many have been the technological advances in the industry that have tended to require the financing of the large operators. The cementing of wells in the Southwest first was done in Texas in 1906, and since then the uses and methods of applying cement have increased almost to the point of creating a new science. Many of the early operators relied solely on their wells to flow naturally, but in the third decade of the century the extraction methods included the increased use of a vacuum pump, gas and air lift devices, and an electrical rotary pump placed at the bottom of the well. The installation and use of some of these recent extraction devices has been as expensive as was the entire drilling of many of the early wells. Such technical terms as "effective porosity," "permeability," and "per cent oil saturation" were an unknown tongue to the pioneers, many of whom were forced from the oil industry before the costly laboratory testing of sands and limes became common¹⁸. The pioneers chuckled over many stories of crooked holes when the rotary drilling rig became common. Crooked holes have advantages, however, and a special tool, the whipstock, has been developed for directional drilling. The whipstock deviates the drill at an angle of about two degrees, and it has thus become possible to straighten a crooked hole, or to deflect a well in a desired direction. With the whipstock it has been possible to drill several wells from one location, to avoid tools that have been lost in the hole, and to extinguish burning wells by diverting the oil and gas from the flames. Directional drilling may add one-third to the cost of a well, however, and thereby become prohibitive to the small operator¹⁹. Other expensive but practical technical devices include a photo-electric apparatus for locating troublesome water, and an electrical gun for perforating casing²⁰. In 1932 the use of hydrochloric acid to revive the production of oil wells was introduced in the Southwest.

¹⁷ Mid-Continent Oil and Gas Association, *Handbook on Unirization of Oil Pools*, St. Louis, 1930, p. 10.

¹⁸ *The Oil and Gas Journal*, Oct. 17, 1935, p. 39.

¹⁹ Eastman Oil Well Survey, *General Catalog*, No. 39, Dallas, Tex., p. 2.

²⁰ P. Charrin to Gerald Forbes, Oct. 20, 1939; Schlumberger Well Surveying Corporation, *Photoelectric Oil Well Water Locating*, Houston, Tex., (n.d.) p. 12.

Since that time the acidizing of wells has become a recognized treatment for increasing a declining production and for opening new producers²¹. These and many other technological devices are accessible to the great oil companies that maintain large laboratory staffs.

In the last 30 years, costly scientific knowledge has earned increased respect and gained wide usage by the major oil companies. The industry did not accept the geologist until 1913-1914. The physicist joined the geologist in the search for petroleum in the 1920's. The greatest success of the physicist has been in locating the salt domes of the Gulf Coast, although in 1936, 3,500,000 acres of western Kansas were examined with the seismograph. As the cost was about \$400 a day, the widespread use of the seismograph was financially out of the reach of the small operators while some of the big firms maintained the physicists and their instruments as specialized departments. The cost also tended to limit the use of the torsion balance, the magnetometer, and the core drill to operators with enormous funds. Of 100 exploratory wells drilled in 1937 in the Southwest, 82 were the result of geological or geophysical study and nearly one-sixth of them found oil. The remaining 18 wells were drilled without scientific investigation and only one of them opened an oil pool. Among the scientists to enter the search for petroleum recently have been the chemists, who attempt to find oil through laboratory analyses of the surface soils, and the paleontologists, who correlate subsurface formations through microscopic study²².

Possibly the most deplorable feature of the heyday of the small producer was the immense waste of gas. During the years of the Glenn and Cushing pools it was proposed in Oklahoma that the state should prevent the interstate piping of gas on the assumption that industries would be induced consequently to locate nearby. Millions of cubic feet of gas were blown into the air because the small operators neither could afford nor knew how to use this natural resource. At Cushing, natural gasoline plants eventually

²¹ A. J. Buchanan to Gerald Forbes, Oct. 6, 1939.

²² E. DeGolyer, "Future of Petroleum Exploration in the United States," *The Oil Weekly*, Mar. 29, 1937, p. 17; *The Oil Weekly*, Apr. 26, 1937, p. 6; Grady Triplett, "Western Kansas History Dates Back to 1888 But First Commercial Well Was in 1923," *The Oil Weekly*, May 3, 1937, p. 52; Chase E. Sutton, "Pure Opens New Pool at Lost Lake, Texas," *The Pure Oil News*, Oct., 1929, p. 10; Statement of James H. Gardner, Tulsa, Okla., Oct. 28, 1939.

were installed by the largest producers; but those plants only extracted the liquid parts of the gas. The very valuable dry gas was freed²³. Twenty years later in the immense gas field of the Texas Panhandle essentially the same conditions prevailed. It was believed that nearly 70 per cent of the gas was lost in 1934 when it was freed after the extraction of the natural gasoline²⁴. The waste was equal to about 60 per cent of the total daily commercial and domestic consumption of the entire United States. Between 1927 and 1932, 14,000 miles of gas pipe lines were laid from the enormous fields of the Texas Panhandle and the Hugoton region of western Kansas. Two lines of 24-inch pipe, more costly than a railway, were laid to the Chicago district. A federal court decision has relieved the owners of pipe lines from the responsibility of purchasing gas from producers who do not own transportation lines. Thus it has become obvious that men with limited finances cannot prosper in the gas division of the industry except in unusually fortunate circumstances²⁵.

Early in the century, the salt water from the oil wells flowed into the streams, a method of disposal that killed both animals and vegetation. In the 1930's laws were enacted in most of the petroleum producing states which required the oil producers to dispose of the brine in a manner not damaging to livestock, agriculture or game²⁶. The methods of disposal included the cementing of the holes to prevent the brine from entering the wells, the construction of huge reservoirs for evaporation on the surface, the removal of the salt, and the pumping of the salty water back into the earth. Either the control or the disposal of the salt water has become an expensive burden for the small producer.

At one time it was possible for a man with relatively little capital to enter the refining division of the industry. Those refineries, called teakettles, used the distillation process and the two important products were kerosene and gasoline, with the former

²³ United States Geological Survey, *Mineral Resources of the United States*, 1937, p. 1061.

²⁴ *The Oil and Gas Journal*, Feb. 7, 1935, p. 56.

²⁵ *Magnolia Oil News*, Jan., 1932, p. 25; American Petroleum Institute, *Petroleum Facts and Figures*, 1939, p. 99; R. G. Barnum, "The Panhandle Oil and Gas Field," *The Panhandle of Opportunity*, (booklet of the Rock Island Lines, Chicago) p. 19.

²⁶ C. P. Parsons, "Keeping Salt Water in the Ground," Ms., paper read before spring meeting of Mid-Continent District, American Petroleum Institute, Tulsa, Okla., Feb. 25-26, 1937.

dominating the market. Distillation had the virtue of being relatively simple; it also had the fault of wasting much of the heavier parts of the petroleum²⁷. By 1916 the automobile industry had developed a great market for gasoline, and the Burton cracking process of refining was being used²⁸. The cracking process was more expensive and complicated, but superior to distilling because it increased from 26 to 44 per cent the amount of gasoline that could be manufactured from crude petroleum. The cracking process became the first important step in the removal of the small refiners from an important position in the manufacturing of gasoline. There have been two later developments in refining technique, polymerization and hydrogenation. Polymerization, by combining cracking with catalytics, has brought several gaseous hydrocarbons into use as motor fuel. Hydrogenation still is in a somewhat experimental stage, and its development is expected to increase the possible raw materials of motor fuel. Efficient refineries today manufacture products as different as asphalt and alcohol, and they represent capital investments of millions of dollars²⁹.

The Supreme Court of the United States dissolved the horizontally organized Standard Oil Company in 1911. Since that time there has been a constant trend toward highly-integrated, vertical organizations that like the old Standard placed definite emphasis on the transportation phase of the industry. The small operators were entirely helpless against the movement toward integration. One company operating in Texas has its own wells, pipe lines, refineries, retail and wholesale marketing facilities, a loading dock and a fleet of tankers for marine shipment—not to overlook a fleet of airplanes for the hurried travel of its officials and for testing its fuel. The pipe lines of the southwestern states have a total length of 67,000 miles and a capacity of more than 16,000,000 barrels of oil. In West Texas alone pipe lines were constructed in 1927-1928 for a total distance of 5,5000 miles at a cost of more than \$150,000,000. Nearly 1,000 miles of that pipe were laid by two

²⁷ Joseph E. Pogue, *Economics of the Petroleum Industry*, p. 41.

²⁸ *The Oil and Gas Journal*, Mar. 1, 1913, p. 28.

²⁹ *Ibid.*, Jan. 13, 1936, p. 9; F. P. Risdon, "Port Arthur Terminal," *The Texaco Star*, June, 1930, pp. 23-26.

great producing, refining, and distributing companies³⁰. Five large companies jointly constructed a pipe line to transport gasoline from Oklahoma to St. Louis, Omaha, and Chicago, a distance of 1,400 miles, at a cost of nearly \$25,000,000. One of those companies operated at a loss in some departments, but the pipeline dividends brought the firm large profits for the year³¹. Integrated organization permits the distribution of investments and the reduction of risks, factors that are highly favorable to the major companies.

The retail distribution of gasoline through company-owned filling stations was an obvious evidence of vertical organization which developed rapidly after 1915. Retail consumption of gasoline in the United States was about 40,000,000 barrels in 1915 and in 1938 it was 520,000,000 barrels, an increase of 13 fold in 23 years. The explanation of this increase is to be found in the rapidly growing importance of the internal combustion engine, especially in the automobile. The ratio of the retail gasoline pumps to the automobiles in the six states of the Southwest varied in 1938 from one pump to each 12.8 vehicles in Arkansas to one pump for every 18.7 cars in Texas. Thousands of these retail outlets were controlled by the producers of petroleum, and such integrated competition could not be inviting to the small independent dealer³².

A singular phase of the later development of the petroleum industry has been proration, which from the standpoint of the federal government was called conservation. Proration rests on the two principles of conservation and equity. The first important state law was an effort in Oklahoma to prevent overproduction, economic waste, and the consequent decline in price. The compliant interest of the industry in proration has developed with the desire to take a maximum quantity of oil from the underground reservoirs. The limiting of a well's daily production has tended to reduce the oil producers to those persons who were well-financed, because the more slowly the petroleum was sold the

³⁰ R. B. McLaughlin, "A Railway Without Rails or Passengers," *The Texaco Star*, Dec., 1930, p. 10; M. J. Bonham, "Today's Picture of East Texas," *The Conoco Magazine*, May-June, 1932, p. 11.

³¹ "Through Iowa via Pipeline," *The Conoco Magazine*, June, 1931, p. 22.

³² American Petroleum Institute, *Petroleum Facts and Figures*, 1939, p. 107.

longer the owner had to wait for his profit³³. The operator who required a quick return could not afford to invest \$40,000 in a West Texas well that would be permitted at best to produce only 25 to 40 barrels of oil daily. Proration has tended to limit the number of small operators.

A scientific plan to reduce costs and increase the recovery of petroleum was the unit operation of a pool which came in the 1930's. The unit plan, which consists of placing the development and administration of a pool under a single control, has been effective in Kansas, Oklahoma, and Texas. It has succeeded efficiently in those pools where the productive acreage was controlled by a few large companies, as at the South Burbank pool in Oklahoma and the Van pool in Texas. The existence in a pool of numerous small lease or royalty owners has interfered with the organization and operation of the unit plan, despite its scientific soundness³⁴.

While there still remain many small independent operators in all phases of the oil industry of the Southwest, it is equally true that they do not exert a major influence. As producers they are to be found in the areas of shallow production and in the so-called stripper pools. In the production of oil from the deeper formations of Kansas, Oklahoma, Arkansas, Louisiana, Texas, and New Mexico, men with limited finances cannot participate. The technological developments of the petroleum industry have become so complex and expensive that large monetary resources are imperative. The rapid growth in the use of petroleum and the development of a multitude of products have caused the processing of crude oil to become highly scientific and to require investments of millions of dollars. The necessity to protect large investments has developed highly integrated companies that control their own supplies of crude oil, their transportation, refineries, and retail

³³ Joseph E. Pogue, "A Design for More Effective Proration," paper read before meeting of American Institute of Mining and Metallurgical Engineers, February, 1939, p. 4; W. E. Hubbard, "Diminishing Allowable per Well," *The Oil Weekly*, Oct. 26, 1939, p. 36.

³⁴ I. S. Salnikov and M. L. Haider, "Pressure Maintenance and Unitization, South Burbank Pool," *The Oil Weekly*, June 7, 1937, p. 34; *The Oil Weekly*, June 7, 1937, p. 12; A. C. Smith, "Unitization," *The Texaco Star*, June-July, 1936, p. 3; J. Arthur Sohn, "Unitization vs. Competition," *The Oil Weekly*, Sept. 21, 1936, pp. 24-25.

outlets³⁵. The position of the small independent in the oil industry has become similar to that of the guest who ate a chicken dinner at a Texas oil company mess hall. The president of the company asked the guest which piece of the chicken he preferred. The guest politely replied that he had no favorite cut. The president smiled and on the guest's plate he placed the chicken's neck³⁶.

³⁵ Mid-Continent Oil and Gas Association, *Handbook on Unitization of Oil Pools*, pp. 32-33; E. B. Reeser to Gerald Forbes, Sept. 28, 1939; W. G. Skelly to Gerald Forbes, Sept. 28, 1939.

³⁶ *The Texaco Star*, Dec., 1928, p. 32.

THE ANGLO-AMERICAN COTTON-RUBBER BARTER AGREEMENT

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The reciprocal trade agreement between the United States and the United Kingdom was signed on November 17, 1938. It was contended at the time that the United Kingdom had "joined the United States in a policy of trade liberalization"¹ because the improved tariff treatment accorded under the trade agreement was generalized to all other countries through the operation of the most-favored-nation clause.² Seven months later these same countries signed the cotton-rubber barter agreement, bearing more resemblance to German trading methods than to the "trade liberalization" which had heretofore characterized American trade agreements policy.³ This paper will analyze the place of the cotton-rubber barter agreement in recent American commercial policy.

The chief provisions of the cotton-rubber barter agreement, signed in London on June 23, 1939, were as follows.⁴ The United States agreed to place on board ship at New Orleans 600,000 bales of raw cotton, valued on the basis of the average market price published by the United States Bureau of Agricultural Economics,

¹ Statement of Assistant Secretary of State Sayre, Department of State, *Press Releases*, No. 481, Dec. 17, 1938, p. 435.

² The United States did not generalize concessions to Germany because the United States found that German international trade practices "substantially" discriminated against American exports.

³ More recently there has been discussion of the possibility of additional barter agreements. See *The Wall Street Journal*, May 9, 1940, p. 1.

⁴ Department of State, *Press Releases*, No. 508, June 24, 1939, pp. 547-9. The terms of the agreement were published in the United States as *Treaty Series*, No. 947. In the United Kingdom it was published as a Parliamentary Command Paper, Cmd. 6048. See also Great Britain, *Parliamentary Debates*, Official Reports, Fifth Series (hereafter cited in this paper as *Hansard*), Vol. 348, June 23, 1939, cols. 2621-2. For the enabling legislation in the United States see S-2697.

plus a small fee for loading it on board ship.⁵ In turn, the United Kingdom agreed to place a quantity of rubber equal in value to the cotton on board ship at Singapore.⁶ The stocks of raw materials thus acquired were to serve as "reserves . . . against the contingency of a major war emergency." In case no such emergency arose within seven years either government was free to dispose of the stocks for other reasons after consulting the other contracting party and "taking all steps to avoid disturbance of the markets."⁷

It is clear that the initiative for the agreement did not come from the British Government. The project was announced in the United States before the British were officially informed of it.⁸ After the United States communicated formally with the United Kingdom, Mr. Chamberlain announced:

His Majesty's Government are fully alive to the importance of this suggestion, and they have replied that, while fully sharing the United States Government's objections to attempt to substitute barter for the ordinary processes of international trade, they agree that in the special circumstances of the present time the exchange of materials which would not enter into normal commerce is not open to the same objections pro-

⁵ If the United States applied an export subsidy before the cotton was delivered, the United States was required to deliver the United Kingdom "an additional quantity of cotton proportionate to the reduction in price . . . caused by such action."

⁶ The actual amount of rubber involved was approximately 85,000 long tons. U. S. Tariff Commission, *Crude Rubber*, Nov., 1939, p. 30. The agreement provided that the quantity of rubber should be determined by the Department of Statistics in the Straits Settlements on the basis of the price of rubber plus a small fee for loading it on board ship.

⁷ For the purpose of this paper, the technical difficulties presented by the agreement because of the war are irrelevant, but they may be noted briefly in passing. The British government, through the newly created Ministry of Supply, began purchasing the rubber in Oct., 1939, but rubber seems to have been scarce and the price high. *Hansard*, Vol. 352, Oct. 17, 1939, col. 694; U. S. Department of Commerce, *Rubber News Letter*, Nov. 30, 1939. In Feb., 1940, the United States agreed to wait until Sept. 30, 1940 for the receipt of the rubber. *The India Rubber Journal*, Mar. 2, 1940, p. 16. American shipments of cotton have been delayed by the shortage of shipping space. No space was allocated for the shipment of barter cotton during the months of Feb., Mar. and Apr., 1940, because the British supply was adequate and it was deemed that shipping space should be reserved for more urgently needed commodities. U. S. Department of Agriculture, *Foreign Crops and Markets*, Jan. 27, 1940, p. 89. Substantial amounts were shipped during May, but in June the British government restricted barter shipments to 20,000 bales per month. Inasmuch as more than 200,000 bales remain to be shipped the agreement cannot be completed before May 1, 1941.

⁸ In reply to a question in the House of Commons Mr. Stanley, President of the Board of Trade, stated that no proposals had been received from the United States concerning a barter deal. *Hansard*, Vol. 346, Apr. 18, 1939, col. 197. See also, Apr. 19, 1939, col. 357.

vided world prices are not thereby increased. His Majesty's Government have expressed their readiness to enter into discussions as to the means by which the obvious practical difficulties which arise in such a transaction should be surmounted. Negotiations have accordingly been opened with the United States Government.⁹

It is perhaps significant that in making this announcement Mr. Chamberlain did not emphasize the United Kingdom's eagerness for the exchange. British dealers pointed out immediately that they could see that the United States wanted the plan to get rid of some surplus cotton but that the United Kingdom was not suffering from excess stocks of raw rubber or any other strategic raw material the United States might like to have. In addition, the Liverpool Cotton Association criticized the plan on technical grounds. They held that bales of cotton from the United States were always torn apart for examination after they arrived in Liverpool; this would be impossible if the cotton were subsequently to be stored for a period of years. Rubber from British colonies, on the other hand, is a fairly well standardized product, and the United States would be assured of the quality of the rubber received.¹⁰

Not only did the cotton interests oppose the agreement; the rubber interests fought it as well. They seem to have been well satisfied with the international rubber control scheme, and they feared that a sudden increase in the production quota necessary to conclude this agreement would interfere with the smooth operation of that scheme. In addition, they expressed the fear that the United States planned to ruin the effectiveness of the scheme by flooding the rubber market once the exchange was completed.¹¹

⁹ *Hansard*, Vol. 346, May 4, 1939, cols. 2075-6. See also Vol. 347, May 10, 1939, col. 503; May 23, 1939, col. 2106; Vol. 348, June 6, 1939, col. 193; June 13, 1939, col. 1090.

¹⁰ *Ibid.*, Vol. 348, June 9, 1939, cols. 824-6; cols. 831-2; Vol. 349, June 27, 1939, col. 188. Some of the members of Parliament viewed the exchange with humor, one member asking: "Could we not exchange Mr. Chamberlain for Mr. Roosevelt?" Mr. Stanley replied, "I am always ready to consider any exchange which is to the mutual advantage of both parties." *Ibid.*, Vol. 348, June 6, 1939, cols. 193-4. In the United States the *New York Times* criticized the plan editorially, July 1, 1939, p. 16.

¹¹ *Wall Street Journal*, May 22, 1939.

The original proposal of the United States had also suggested an exchange of wheat for tin, but British tin interests objected too strongly, and the agreement accordingly dealt with cotton and rubber only.¹²

The American State Department has often expressed a complete aversion to the trade methods pursued by closely regulated economies such as the German.¹³ It is held that the American system follows liberal lines; barter arrangements and clearing and payments agreements are regarded as restrictive methods, tending to destroy the trade of third countries and to force trade into uneconomic bilateral channels. Soon after the Trade Agreements Act was passed Mr. Peek, working in opposition to the trade agreements organization, devised a barter arrangement with Germany. Germany had agreed to buy 800,000 bales of cotton annually and to pay one-fourth of the price in dollars and the remainder in marks useful only for the purchase of German goods. Serious objections were raised to the plan by the State Department and the Executive Committee on Commercial Policy, and it was finally abandoned.¹⁴

Following this unhappy episode there seemed to be little enthusiasm for barter methods. American officials often pointed with pride to American trade agreements and viewed with disdain the barter methods of other countries. Assistant Secretary of State Sayre speaking to the Cotton Conference of the American Farm Bureau Federation severely denounced illiberal trade practices: "Barter is primitive at best; it is a reversion to savagery, resorted to when more intelligent and productive methods break down."¹⁵ Secretary Hull has often attacked barter methods.

¹² Mr. Stanley, in reply to a Parliamentary question, stated that no further arrangements were contemplated at present. *Hansard*, Vol. 349, July 4, 1939, col. 1135; *New York Times*, June 24, 1939, p. 1. The *New York Times* reported that similar negotiations with the Netherlands were unsuccessful.

¹³ See the Department of State, *Commercial Policy Series*, *passim*.

¹⁴ *Foreign Policy Reports*, Vol. 11, Apr. 24, 1935, pp. 43-4. For an analysis of recent American-German commercial relations see Henry J. Tasca, *World Trading Systems*, pp. 33-44.

¹⁵ Department of State, *Press Releases*, no. 481, Dec. 17, 1938, p. 436. This statement is especially significant in view of the fact that it was addressed to cotton men soon after the Anglo-American trade agreement was signed. This agreement had secured a concession on raw cotton, and the moral of Mr. Sayre's speech was that reciprocal reduction of trade barriers would care for the American cotton surplus, and that crude barter methods are unnecessary.

At a press conference he summarized his attitudes toward the German barter system as follows:

A certain amount of . . . interchange can and does, of course, take place under the so-called barter agreements, but paralyzes world markets in the process. *This is especially true in markets for raw materials, such as cotton.* In contrast to the smoothly operating and productive methods of world trade, barter agreements involve endless diplomatic negotiations. They involve domination by the Government not only of commerce but of production; and they create arbitrary discriminations.¹⁶

Assistant Secretary Sayre's statement had been given directly to cotton men; Secretary Hull pointed out that barter arrangements dealing with raw materials such as cotton were especially objectionable. Yet, just seven days after Mr. Hull made his statement the Anglo-American cotton-rubber barter plan was announced, and the State Department issued a statement of its "sincere hope" that the plan would be carried through.¹⁷

In view of the clearcut official dicta condemning barter methods, the question arises why it was necessary to use this obnoxious form of international trade for one relatively small transaction. The rubber to be shipped to the United States under the terms of the agreement represented only about one-fifth of the usual American annual consumption. The cotton to be shipped to the United Kingdom represented about one-half of the normal annual British cotton consumption.¹⁸

The most complete defense of the cotton-rubber barter agreement was that given by Secretary Hull. His statement deserves quoting at some length:

The proposal is simply to exchange commodities . . . in order to create stocks of supplies for defense purposes. They would agree by treaties to

¹⁶ *Ibid.*, No. 497, Apr. 8, 1939, p. 264. Author's italics.

¹⁷ Department of State, *Press Releases*, No. 498, Apr. 15, 1939, pp. 297-8. Another release printed in this same number attempted to answer additional charges that were brought against the plan.

¹⁸ At the time the agreement was signed the United States had a surplus of 11,000,000 bales. The barter was thus designed to relieve the United States of approximately 5½ per cent of this total. *New York Times*, June 24, 1939, p. 1.

store up the commodities so exchanged so that the normal market situation cannot be interfered with. . . .

From the standpoint of the effect on the trade agreements program that is quite different from barter arrangements made by certain other countries. Take the German policy. They base their commercial policy primarily on bilateral trade. That is to say, Germany has a kind of Government-controlled commercial and exchange situation with a serious obstruction of normal trade, especially triangular or multilateral trade. . . . The bilateral policy dries up and greatly restricts commerce among nations. The practical effect upon other countries is seen in the arbitrary restraints and restrictions imposed on their trade by governments practicing the bilateral system. In the case of the cotton-rubber barter (*sic.*) there is simply an opportunity to exchange two . . . commodities between two countries, the commodities to be stored and kept off the market, so that the commodity price situation cannot be interfered with.¹⁹

The greater part of this statement is a criticism of German barter methods, and this criticism makes the statement extremely difficult to understand. The argument presented against German methods are similar to those used on numerous occasions before. The statement builds up a defense for the Anglo-American barter deal only in so far as it points out significant differences between this agreement and the type employed by Germany. The first difference pointed out is that the Anglo-American barter is for the purpose of creating stocks of supplies for defense purposes and that these commodities would be released in such a way that the normal market situation would not be disturbed. The second difference is implied by the first: Germany has made it a basic policy to conduct international trade in this manner; Britain and the United States are using it for just this one unusual situation.

The second difference is obvious and need not be considered further, but its importance should not be overlooked in making a final judgment as to whether the barter deal was justified. Unlike Germany, the United States and the United Kingdom still sought to conduct the bulk of their international trade on a liberal basis.

The first difference is not so clear, and the argument used in

¹⁹ *Department of State Appropriation Bill for 1940*, hearings before the Subcommittee of the House Committee on Appropriations, pp. 7-8.

support of it is far from convincing. Granting that surplus stocks of these raw materials are essential for defense purposes, it is not explained why it was necessary to accumulate them by a method so roundly denounced for ordinary international trade. Would it not have been possible for the United Kingdom gradually to expand its purchases of raw cotton with the end in view of building up a war time reserve? In making these purchases, could not the United Kingdom have purchased cotton on the world market in the usual way? The answer that such purchases would have caused an abnormal rise in the price of cotton is not at all satisfying. It could be contended as easily that the barter was a force tending to raise the world cotton price. The surplus cotton stocks held by the United States government have tended to depress cotton prices because of the uncertainty as to when and how they would be marketed. This uncertainty is relieved to the extent that surplus stocks have been shipped to England in the barter transaction. The real answer to the questions stated above is that had the United Kingdom purchased raw cotton on the world market the United States might not have been relieved of its problem of caring for an unwanted surplus; the answer has little to do with the purpose for which the reserves were to be accumulated or with a desire to prevent an interference with the world price of cotton.

The rubber market seems to have been affected more seriously than the cotton market. This was to be expected for there was no surplus of rubber.²⁰ Production of rubber is controlled by an international control scheme. American officials probably hoped that a British agency could purchase rubber on more advantageous terms than an agency of the American government. Although explaining the desirability of the barter from the standpoint of economic opportunism, this fact gives no indication of the manner in which the barter can be oriented into a commercial policy built upon liberal lines. German trade policy is, after all, oppor-

²⁰ When the barter agreement was being discussed in the House of Commons, one member asked Prime Minister Chamberlain whether he was aware of the fact that the commodities that "the United States Government propose to exchange are already in their hands, and, therefore, will not involve purchases from people who know that these purchases are about to be made, as the purchases of rubber . . . will involve in this country?" Mr. Chamberlain replied: "Yes, Sir. We are quite aware of all that." *Hansard*, Vol. 346, May 4, 1939, col. 2076.

tunistic. Seeing a chance for an individual transaction which seems profitable, Germany grasps it. In the cotton-rubber barter it appears that the United States did the same thing.

The manner in which the cotton-rubber barter agreement overcame the major objection that the United States has always raised to German barter methods, namely, its effect on third countries, remains completely unexplained. Instead of allowing the other countries of the world to compete with the United States in selling cotton to the United Kingdom, the United Kingdom entered into an exclusive purchase commitment with the United States. Likewise, third countries producing rubber were deprived of the opportunity to compete with the United Kingdom in selling rubber in the United States. The cotton-rubber barter was just as disastrous to what Mr. Hull called "triangular or multilateral trade" as any other form of international bilateralism. The difference between the Anglo-American barter and the German system is distinctly one of degree, not of kind.

The fact that the United States was able to dispose of a part of an undesired cotton surplus in exchange for rubber, procurement of which a "major war emergency" might render difficult, seems to be the chief explanation of why the United States was willing to depart from its traditional trading methods.²¹ This transaction is an example of a lack of coordination between American agricultural policy and other parts of American commercial policy. The international commercial policy followed by Secretary Hull during the past six years aims at a reduction of trade barriers and promotion of the principle of equality of treatment with respect to all forms of trade control. The trade-agreements program has been fostered by the State Department to advance this policy, and surprisingly few inconsistencies have arisen within the program

²¹ Viewed from the standpoint of "horse trading" it seems that the chief gain of the United Kingdom from the barter was good-will. The United Kingdom does not stand in as urgent need of cotton for emergency purposes as of foodstuffs. The war demand for cotton is moderate as compared with the war demand for foodstuffs. The proposals for storage of commodities as a war reserve, made by economists John M. Keynes and Sir Arthur Salter during the early months of 1939, centered around problems of storing wheat rather than cotton. In other words, the United States was parting with a commodity rendered somewhat useless by its abundance in exchange for a war-time necessity. The United Kingdom, on the other hand, exchanged rubber, of which it had no excess stock to dispose, for cotton, the war-time demand for which is not so great as rubber.

itself. The cotton-rubber barter transaction points to the fact that American commercial policy, unfortunately, is not determined by Mr. Hull alone.²² Of recent years the problem of finding an export market for surplus agricultural products has given the Department of Agriculture an important part in commercial policy. The barter agreement with England was accepted by the State Department, not because it was consistent with the trade agreements program, but because it seemed expedient to make a concession to agricultural interests. The State Department, cognizant of the existence of large stocks of cotton, may have feared that an even more radical proposal would be advanced were the barter proposal defeated.

²² General inconsistencies in American commercial policy are outside the scope of this paper. The question may be raised in passing, however, as to whether export subsidies on agricultural products, price raising schemes, and, above all, neutrality legislation, do not interfere with the smooth flow of international trade and therefore conflict with trade agreement philosophy. (Neutrality legislation may, of course, be accepted as a part of a liberal trading system if we accept the Smithian dogma that "defense is more important than opulence.") The cotton-rubber barter is merely the most glaring, though hardly the most important, contradiction in policy.

THE HISTORY OF THE SOUTHERN ECONOMIC ASSOCIATION, 1927-1939

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The Southern Economic Association had its beginnings in the fall of 1927.¹ On October 24 of that year, the writer sent a letter proposing the organization of this association to each of the following persons: Dean D. D. Carroll, School of Commerce, University of North Carolina; Dean Lee Bidgood, School of Commerce and Business Administration, University of Alabama; Simeon E. Leland, then Associate Professor of Economics, University of Kentucky; and Mercer G. Evans, then Associate Professor of Economics, Emory University. The letter contained the following words: "The faculty of the College of Business Administration, University of Florida, has originated the idea of organizing a southern economic conference to be composed of the faculty members of colleges of business administration and departments of economics in the South. . . . At the suggestion of our faculty, I am taking the initiative of calling together in Atlanta, Georgia, within the next month or so, a representative from each of the following universities: Alabama, North Carolina, Kentucky and Emory. The five of us are to compose a committee for working out the details of this conference."

Each of the persons to whom this letter was written replied immediately. On October 28, Bidgood wrote that "your plan of a sectional association of teachers of economics and business administration is interesting and I shall be glad to assist in every

¹ There are three principal sources of data of which the author has made use in preparing this article: first, letters which he has written to and letters which he has received from various individuals in the South; second, minutes of the annual meetings of the association; and third, minutes of the executive committee of the association. The letters are on file in the office of the author and the minutes are on file in the office of the secretary-treasurer of the Southern Economic Association. Unless otherwise specified, all statements of fact as well as all quotations herein used are taken from these sources.

way I can, if you decide to push the matter." On October 28, Carroll replied that he was interested but that pressure of time and limitations of budgets would "prevent us from being represented at Atlanta." He made the suggestion that "we communicate with all teachers of economics and business subjects in southern educational institutions, urging them to attend the meeting of the American Economic Association in Washington during the Christmas vacation, and also notifying them of the plan to organize a group at this time." Leland, in his reply of October 29, made a similar suggestion saying that "we could then formulate our plans and sometime before the meeting closed we might be able to get a number of others interested in our project so that we could get a membership committee representing all parts of the South." Evans replied on October 26 to the effect that he was "delighted" to cooperate and that he had consulted representatives from Oglethorpe University, Agnes Scott College, Alabama Polytechnic Institute, University of Georgia, and Georgia School of Technology who expressed a desire to join in with the proposal.²

On the strength of the replies to this letter plus the assurance of Evans that representatives of Oglethorpe University, Agnes Scott College, Alabama Polytechnic Institute, University of Georgia and Georgia School of Technology were eager to join in, the writer called a meeting of representatives of ten institutions to be

² Prior to mailing out the foregoing letter certain steps looking toward the organization of a southern conference had already been taken. In the winter of 1926 C. A. Curtis, then Associate Professor of Finance at the University of Florida and the writer conceived the idea of an association of teachers in economics and business in the South. They talked it over several times. They discovered that Leland to whom reference already has been made was also thinking along the same line. During the summer of 1926, Leland and Curtis had two meetings at which they argued the matter pro and con. At the suggestion of the writer Curtis prepared a report on the results of his and Leland's thinking consisting of nine typewritten pages which contained detailed statements as to the length of the conference, the nature of its program and the methods to be used in organizing it. Curtis pointed out in the report that an organization was needed because of the lack of close contacts between faculty members in southern colleges and universities, because of the rapid economic transformation which was going on in the South and because southern economic and business teachers found it difficult, due to costs of long-distance travel, to attend the meetings of the American Economic Association which were always held in the North. The report which Curtis made was presented to the faculty of the College of Business Administration of the University of Florida and the action which was taken by that faculty caused the writer to send the letter to Bidgood, Carroll, Leland and Evans.

held at the Henry Grady Hotel in Atlanta, Georgia, December 10, 1927. Bidgood, Leland and the writer were present at this meeting. Evans could not attend due to a conflicting engagement which he had in Greensboro, North Carolina, but James W. Martin, then of Emory University, represented him. Carroll did not attend this meeting nor did he send any one to represent him or the University of North Carolina. Mercer University at Macon, Georgia, however, sent a delegate, and "ten colleges and universities in the South" altogether were represented.³

At this meeting, a committee composed of Bidgood, Leland, Martin and the writer drew up the detailed plans of the proposed organization. When the plans were completed they were presented to the larger group of representatives. This group accepted the plans by a resolution to the effect that "we do hereby constitute ourselves into an organization to be known as the Southern Association of Instructors in Economics and Business Administration." Immediately after the passage of this resolution, the association proceeded to elect the following officers: president, Walter J. Matherly; vice-president, S. E. Leland; secretary, Mercer G. Evans; and treasurer, T. W. Noel, then Dean of the School of Commerce of the Georgia School of Technology. It was decided to hold the first annual session of the association on February 20-22, 1928, and a tentative program therefor was adopted. No constitution and by-laws, however, were worked out and no decision as to membership fees was reached.

Some of those who participated in the organization of this association felt that the action taken should be presented to the southern members of the American Economic Association who would be in attendance at its 1927 meeting in Washington during the Christmas holidays. When the results of the meeting were sent out to the various colleges and universities of the South, there were others who suggested that a similar method of procedure be followed. Consequently, a meeting was held in Washington on

³ "The Southern Association of Instructors in Economics and Business Administration—Origin, Purpose, Present Status, and Tentative Program for First Annual Meeting." This is a mimeographed report consisting of two pages which summarized the results of the meeting of December 10 and was mailed out by the author some days after the meeting was held to faculty members in economics and commerce in southern colleges and universities.

December 29. While there were present at the meeting representatives from most of the institutions in the upper South there were only a few from the lower South. A brief statement was made at the meeting as to what action had been taken in Atlanta on December 10 and then the matter was thrown open for general discussion. In the arguments pro and con considerable opposition on the part of certain institutions in the upper South developed. Even though no vote was taken, a majority of those present seemed to feel that a regional association was desirable and that those who were responsible for what had occurred at the Atlanta meeting should proceed with the execution of their plans.

But execution of these plans proved to be very difficult. Mercer G. Evans, J. W. Martin, the writer and others kept in touch with each other after the Washington meeting and continued their efforts toward perfecting a permanent organization. It was suggested by several persons that the name of the association be changed from Southern to Southeastern, that more time be given to working out the program and that the first meeting be held in October, 1928. Evans proposed that this meeting be held under the auspices of the Atlanta group of economists. The Atlanta group of economists which had been in existence for some time was an association of faculty members in economics and commerce from Agnes Scott College, Oglethorpe University, Georgia School of Technology and Emory University. This group as early as October, 1927, had gone on record in favor of a southern association. Evans' proposal was presented to this group and on March 17, 1928, it adopted the following resolution:

First, the proposed first meeting of the Southern Association of Instructors in Economics and Business should be held in the fall of the year 1928;

Second, that the president and vice-presidents should be given authority to fix the time, place, and program, of the said meeting;

Third, that the tentative nature of the meeting—whether it be a conference on economics and business administration, or an association meeting—shall be left to these officers for determination; but that the permanent nature of the meeting shall be left to the fall assembly for determination;

Fourth, that Dean R. P. Brooks, of the University of Georgia, and

Dean Lee Bidgood, of the University of Alabama, should be asked to serve as vice-presidents of the organization in the performance of the above duties.

The action of the Atlanta group provided the impetus necessary to take the next step. The group proceeded without delay to appoint a local committee on arrangements composed of Dean Edgar H. Johnson, Emory University; Dean Thomas W. Noel, Georgia School of Technology; Dean A. S. Libby, Oglethorpe University; and Professor J. M. Wright, Agnes Scott College. Mercer G. Evans, Emory University, acted as secretary of the committee. The original Southern Association of Instructors in Economics and Business Administration with its officers disappeared and the Southeastern Economics Conference without officers other than the members of the local committee took its place. Under the auspices of the local committee the first meeting of the Southeastern Economics Conference was held in Atlanta on November 9-10, 1928.⁴

The program of this conference which consisted of 12 principal papers indicates the interests of those who attended and participated in the conference. The subjects with which these papers dealt and the authors thereof were as follows: "The Industrialization of the South" by R. P. Brooks; "Analyzing Ourselves in the South" by Broadus Mitchell; "Decentralization of Industry in the South" by Marcus Whitman; "Some Conditions and Attitudes of Southern Cotton Mill Villagers" by Lois MacDonald; "The Economics of Welfare Work in the Cotton Mill Villages of the South" by Jean Davis; "Cooperation and the Problem of Farm Relief" by E. M. Kayden; "Rural Banking Problems" by J. V. Bowen; "Problems in the Social Control of Banking" by H. L. Severson; "Recent Trends in Southern Taxation" by J. W. Martin; "Electric Power and Water Resources in the South" by Thorndike

⁴ "Special credit is due to Dean W. J. Matherly, of the University of Florida, and Professor C. A. Curtis, formerly of the University of Florida, and Professor Simeon Leland, formerly of the University of Kentucky, for originating the proposal that such a conference should be held. Professor Matherly is due special credit for his efforts in developing the project. He was originally aided in this by Dean Lee Bidgood, of the University of Alabama, and by Professor Mercer G. Evans, of Emory University, and Professor J. W. Martin, formerly of Emory University."—*The Industrial South: Proceedings of the First Annual Session of the Southeastern Economics Conference*, (Banner Press, Emory University, Georgia, 1929), p. 3.

Saville; "The Economics of Production, Fabrication and Distribution" by Henry M. Payne; and "Contents and Trends of Business School Curricula in the South" by T. W. Noel and C. B. Wray. Each of the men who participated was from the South. All of the papers except two were published in a little volume called *The Industrial South*.

The local committee of the Atlanta group together with the assistance of one adviser from each of six states formulated the program and administered the activities of the Second Annual Session of the Southeastern Economics Conference. The conference was again held in Atlanta, Georgia. The dates were November 15-16, 1929. The subjects which were discussed were taxation and budgetary control of state finances; rural and agricultural problems; labor and scientific management; tariff and tariff legislation; teaching and curriculums in economics and commerce; and a survey of research projects in the South under way, proposed, or to be undertaken. Those who presented the papers were all from the South except one. Due to the lack of funds, no proceedings were published. Each of the sessions of the conference had better attendance than the year before.

Before it adjourned, the conference "unanimously decided to create a formal organization." The following were elected as officers for the academic year 1929-30: Walter J. Matherly, University of Florida, president; O. C. Ault, George Peabody College for Teachers, vice-president; and Mercer G. Evans, Emory University, secretary-treasurer.⁵ A committee on constitution and by-laws was appointed consisting of J. W. Scott, Alabama Polytechnic Institute, chairman; C. B. Wray, Mercer University; M. O. Phillips, Washington and Lee University; J. V. Bowen, Mississippi State College; and R. C. Dennison, Georgia School of Technology. Likewise, a program committee was appointed composed of T. R. Snavely, University of Virginia; R. P. Brooks, University of Georgia; J. W. Bell, University of Mississippi; J. M. Wright, Agnes Scott College; C. E. Allred, University of

⁵ If the author were asked who more than any other had contributed to the founding and early development of the Southern Economic Association he would without hesitation name the late Mercer G. Evans. Had he not resigned from Emory University and accepted a position with the United States government in Washington, he would undoubtedly have been elected to the presidency of the association for 1935-36.

Tennessee; and W. C. Jensen, Clemson College. All of the officers chosen were elected to positions which had not at that time been constitutionally created.

The officers of the conference together with Scott of the constitution and by-laws committee and Brooks and Wright of the program committee, met at the Henry Grady Hotel in Atlanta on March 1, 1930, and voted unanimously to hold the 1930 meeting in Atlanta. It requested Evans, J. M. Wright, T. W. Noel and Edgar H. Johnson to serve as a committee on local arrangements and to fix the dates of the meeting in late October or early November. It decided that all papers presented should be limited to 20 minutes in length; that they should show evidence of original research; that there should be widespread distribution of persons on the program; that there should be a report on current economic progress in each state by a resident thereof; and that a few individuals from business and public life should be invited to discuss current topics such as chain stores, power problems, labor unions and so on. It was suggested that the constitution and by-laws should provide for both individual and institutional memberships, the former carrying annual dues not to exceed \$2.00 and the latter, dues not to exceed \$10.00; that sustaining or other kinds of memberships at higher rates might be provided; and that there should be three vice-presidents who should function as chairmen of membership, of research and of program respectively.

In compliance with these actions the Third Annual Session of the Southeastern Economics Conference was held in Atlanta, Georgia, on November 14-15, 1930. One hundred and sixty-seven persons registered during the session. Of these registrants, 67 were college or university professors, 29 were professionally interested in economics, but attached to business enterprises or governmental bureaus, and 38 had no professional connection of any kind with economic study or research. The program was divided into five parts: regulation of public utilities; problems of agriculture; presidential addresses; industrial revolution in the South; and the chain store movement. A total of 15 papers was presented. Of the 15 persons presenting these papers, three—O. C. Stine, U. S. Bureau of Agricultural Economics; Albert H. Morrill, president of the Kroger Grocery and Baking Company; and Carl N. Schmalz,

assistant director, Bureau of Business Research, Harvard University—were from outside the South. Addresses by the presidents of the Southeastern Economics Conference and the Southeastern Political Science Association were delivered at a joint meeting of these associations, since they were both in session in Atlanta at the same time. The entire proceedings of the conference were published.

At the last meeting of the conference which was held on November 15, 1930, Professor J. W. Scott, chairman of a committee appointed at the 1929 session to draft a constitution and by-laws presented his report and moved its adoption. The motion was seconded and was carried "unanimously without discussion." In the constitution and by-laws so adopted the name of the conference was changed to the Southeastern Economic Association. The association operated under this name until its Fifth Annual Conference in 1932. On November 12 of that year it changed its name to the Southern Economic Association. At its eighth annual meeting on November 9, 1935, the association changed its annual dues for individual members from \$2.00 to \$3.00. Aside from these and one or two other very minor revisions, the association still operates under its original constitution and by-laws.⁶

The objects of the Southern Economic Association, as specified in its constitution, are as follows: "The objects of this Association shall be the stimulation of interest in economics and economic questions and the encouragement of original research along economic lines with the view of assisting in the solution of the economic questions which inevitably appear in the agricultural and industrial development of the South" (Art. II). Membership in the association is determined by the following language: "Membership in the Association shall be open to any individual, department of economics, school of commerce, library, club, or business institution interested in the promotion of the objects of the Association, upon the invitation of the Executive Committee, and upon the payment of the annual dues" (Art. III). The officers

⁶ A committee on constitution and by-laws, however, was appointed at the Twelfth Annual Conference held in Charleston, South Carolina, November 3-4, 1939, to revise completely the constitution and by-laws and to report at the Thirteenth Annual Conference to be held in 1940.

of the association are president; three vice-presidents—one in charge of program, one in charge of membership and one in charge of research; and secretary-treasurer. These officers together with past presidents who have retained their memberships constitute the executive committee and are elected for one year (Art. IV). The executive committee designates the time and place of annual meetings and administers the activities of the association in interims between annual meetings. The by-laws merely specify more in detail the duties of the executive committee, the kinds of memberships together with the dues thereof and the rights and privileges of members.

In anticipation of the adoption of the constitution and by-laws on November 15, 1930, the president of the association had already appointed a committee to nominate officers for the ensuing year. This committee presented its nominations and the association elected the following officers: Lee Bidgood, University of Alabama, president; Tipton R. Snively, University of Virginia, vice-president in charge of program; O. C. Ault, George Peabody College for Teachers, vice-president in charge of membership; James W. Martin, Emory University, vice-president in charge of research; and Mercer G. Evans, Emory University, secretary-treasurer. At a meeting of the executive committee later in the day Malcolm H. Bryan of the University of Georgia was appointed editor of publications. He was authorized to consult with the president in selecting two other persons to serve with him as editorial advisers. The executive committee also approved the publication of the proceedings. These proceedings appeared in 1931.

Since the Third Annual Conference in 1930, the Southern Economic Association has held nine other annual conferences. The first four of these conferences, like their predecessors, were held in Atlanta. It was argued that Atlanta was centrally located and that it was more accessible to delegates than any other city in the South. But at a meeting of the executive committee held in Birmingham, Alabama, on February 18, 1933, this argument was abandoned and it was decided to recommend to the association that the meeting place be shifted to other southern cities on the theory that the association would be brought closer to the various areas of the South which it serves and that at-

tendance would be increased. At the Sixth Annual Conference held in Atlanta, November 10-11, 1933, this recommendation was approved. As a result thereof, the Seventh Annual Conference was held in Chattanooga, Tennessee, November 9-10, 1934; the eighth in Chapel Hill-Durham, North Carolina, November 8-9, 1935; the ninth in Atlanta, Georgia, November 6-7, 1936; the tenth in Knoxville, Tennessee, November 5-6, 1937; the eleventh in Birmingham, Alabama, October 28-29, 1938; and the twelfth in Charleston, South Carolina, November 3-4, 1939.⁷

The officers of the association, since 1930-31, have been widely distributed over the entire South.⁸ The names of these officers together with their colleges or universities and the years in which they served are presented in Table I.

While the annual programs of the association since 1930 have varied considerably, they have tended to concentrate around seven major points of southern interest: first, problems of agriculture; second, labor relations; third, wealth and income; fourth, marketing and problems of distribution; fifth, taxation and fiscal policy; sixth, transportation and public utilities; and seventh, government control of business. In two or three annual programs training for public service received some attention. Almost every important phase of southern economic life has received treatment of some kind. While those who appeared on the programs were mainly southerners, every year at least one or two economists from outside the South have presented papers. Each year, with one exception, there has been a presidential address. In general, the papers presented on the programs have been of high quality.

Membership in the Southern Economic Association has increased steadily during the entire 12 years of its existence. In 1928-29 the association was just getting started. Accurate records of membership for that year are not available. Table II presents the number of members from 1929-30 to 1938-39.

The annual conferences of the association have attracted mem-

⁷ Dates and places of the conferences are taken from the annual printed programs of the association.

⁸ While the association has held 12 annual conferences, it has had only 11 presidents. The first conference was held under the auspices of a local committee of the Atlanta group of economists as described earlier in this article and did not have a president the first year.

TABLE I
NAMES OF OFFICERS OF THE SOUTHERN ECONOMIC ASSOCIATION AND THEIR COLLEGS AND UNIVERSITIES SINCE 1930-31

YEARS	PRESIDENT	VICE-PRES.: PROGRAM	VICE-PRES.: MEMBERSHIP	VICE-PRES.: RESEARCH	SECRETARY-TREASURER
1931-32	Tipton R. Snively, Virginia	R. H. Tucker, Washington and Lee	Walter J. Matherly, Florida	J. W. Martin, Kentucky	Mercer G. Evans, Emory, 1932-33 to 1933-34. Two offices divided in 1933, Evans continued as secretary and T. L. Howard, T.V.A., was elected treasurer. D. Clark Hyde, Virginia, succeeded Evans in 1934-35 and L. J. Sil- verman, Chattanooga, was elected treasurer. Two offices recombined in 1935.
1932-33	J. B. Trant, Louisiana State	J. B. Wooley, North Carolina	E. Q. Hawk, Birmingham-Southern	J. W. Martin	
1933-34	R. P. Brooks, Georgia	A. S. Keister, Woman's College, North Carolina	T. C. Bigham, Florida	J. W. Martin	
1934-35	A. S. Keister, Woman's College, North Carolina	Mercer G. Evans, Emory	A. W. Garner, Mississippi State	T. L. Howard, T.V.A.	
1935-36	J. W. Martin, Kentucky	C. B. Hoover, Duke	M. D. Anderson, Florida	E. W. Zimmerman, North Carolina	D. Clark Hyde
1936-37	C. B. Hoover, Duke	T. C. Bigham, Florida	T. F. Haygood, Louisville	T. L. Howard	D. Clark Hyde
1937-38	T. C. Bigham, Florida	R. H. Tucker, Washington and Lee	A. G. Griffin, Furman	T. L. Howard	D. Clark Hyde
1938-39	R. H. Tucker, Washington and Lee	J. B. Wooley, North Carolina	L. W. Lohr, Howard	Malcolm H. Bryan, Federal Reserve Bank, Atlanta	D. Clark Hyde
1939-40	J. B. Wooley, North Carolina	Malcolm H. Bryan, Federal Reserve Bank, Atlanta	R. C. Hon, Southwestern	S. M. Derrick, South Carolina	D. Clark Hyde

bers as well as non-members from all sections of the South. Table III shows the geographic distribution of those who attended the

TABLE II
MEMBERSHIP OF THE SOUTHERN ECONOMIC ASSOCIATION: 1929-30 TO 1938-39

YEARS	INDIVIDUAL MEMBERS	INSTITUTIONAL AND SUSTAINING MEMBERS	TOTAL
1929-30	37	2	39
1930-31	65	8	73
1931-32	69	8	77
1932-33	84	6	90
1933-34	116	10	126
1934-35	104	2	106
1935-36	131	4	135
1936-37	169	4	173
1937-38	181	2	183
1938-39	220	3	223

TABLE III
GEOGRAPHIC DISTRIBUTION OF ATTENDANTS AT THE TWELFTH ANNUAL CONFERENCE OF THE SOUTHERN ECONOMIC ASSOCIATION HELD IN CHARLESTON, SOUTH CAROLINA, NOVEMBER 3-4, 1939

STATE	MEMBERS	GUESTS	TOTAL
Alabama.....	7	2	9
Florida.....	6	0	6
Georgia.....	15	3	18
Kentucky.....	2	0	2
Louisiana.....	3	1	4
Maryland.....	2	0	2
Mississippi.....	1	0	1
North Carolina.....	25	11	36
South Carolina.....	15	24	39
Tennessee.....	7	1	8
Virginia.....	10	1	11
Oklahoma.....	0	1	1
District of Columbia.....	2	1	3
Total.....	95	45	140

Twelfth Annual Conference held in Charleston, South Carolina, November 3-4, 1939.

In the earlier years, the financing of the association was exceedingly difficult. The expenses of holding the first two annual con-

ferences were taken care of largely by the Atlanta group of economists. Every bit of money the association could secure through membership fees was used to cover the costs of publishing the proceedings the first and third years. The costs of publishing the proceedings of the third year, which consisted of more than 200 pages, amounted to \$600 or \$200 more than was originally estimated. As a result of the publication of these proceedings, the association had a deficit of \$300 at the end of the year 1930-31. Suggestions were made at the business meeting on October 16 that membership dues be raised to wipe out the deficit, but no action was taken. It was decided that the proceedings for 1930-31 would not be published unless at least \$400 were in hand prior to publication. In 1931-32 the deficit continued to hamper the work

TABLE IV
INCOME, EXPENDITURES AND CASH ON HAND OF THE SOUTHERN ECONOMIC ASSOCIATION:
1932-33 TO 1938-39

YEARS	RECEIPTS	EXPENDITURES	CASH ON HAND AT END OF YEAR
1932-33	\$282.22	\$172.92	—
1933-34	361.30	233.54	—
1934-35	384.26	307.11	\$77.15
1935-36	463.36	409.36	131.15
1936-37	517.00	451.05	197.10
1937-38	572.00	466.41	302.69
1938-39	663.00	536.41	429.28

of the association. But by the close of 1932-33, the indebtedness had been settled due partly to the efforts of R. P. Brooks and Malcolm H. Bryan in getting certain adjustments in printing debts and partly to the efforts of other persons, and the association was ready to undertake the financing of further projects.

Table IV presents income, expenditures and cash on hand at the end of each year of the association from 1932-33 to 1938-39.

Due to the deficit arising out of the publication of the proceedings of 1929-30 and the difficulties of getting rid of that deficit, no further attempts have ever been made to publish proceedings. In 1932, Malcolm H. Bryan, then of the University of Georgia, proposed that the association start a southern economic journal to be issued quarterly, rather than spend whatever printing funds

it had on the publication of annual proceedings. This proposal was presented at the Fifth Annual Conference on November 11-12, 1932. The association directed the executive committee to proceed with the establishment of the journal, "bringing forth two issues during the current year." The executive committee met on February 18, 1933, and voted to publish "three issues of the quarterly journal during the remainder of this fiscal year and to call the publication the *Southern Economic Journal*." The committee also voted to set up an editorial board composed of an editor and four associate editors. Malcolm H. Bryan, University of Georgia, was designated editor. But due to financial limitations only one issue of the *Journal* came from the press during the fiscal year 1932-33. This issue appeared in October, 1933. During the years 1933-34 and 1934-35 two issues of the *Journal* each year were published.

At the annual business meeting of the association on November 9, 1935, action was taken to place the *Southern Economic Journal* on a sound and permanent basis. At a meeting of the executive committee which was held the night before, Dean D. D. Carroll, University of North Carolina, proposed that the *Journal* be made a joint publication of the university which he represented and the Southern Economic Association. He informed the committee that he was authorized by his institution to offer a subsidy to the amount of \$1000 per year for the operation and publication of the *Journal* on a joint basis. The committee proceeded to consider the many ramifications of Dean Carroll's proposal and decided to recommend it to the association for final action. The recommendation was duly made and the association unanimously adopted the following:

That the publication of the Southern Economic Journal be entrusted to the University of North Carolina, under the following conditions:

(a) The University of North Carolina is to assume all financial responsibility for the *Journal*. The University will appoint a managing editor who will be charged with the duty of limiting the expenditure of the University upon the *Journal* to one thousand dollars per annum.

(b) The Southern Economic Association is to pay the subscriptions to the *Journal* of the entire paid-up membership of the Association at the rate of two dollars per member per annum.

(c) One editor is to be appointed by the University of North Carolina and one editor is to be appointed by the Southern Economic Association. The editors are to be jointly responsible for the policy of the Journal and are to appoint, by joint action, editorial advisers and correspondents.

While the arrangements adopted are subject to withdrawal on one year's notice by either the association or the University of North Carolina, they have been satisfactorily renewed each year since 1935.

The first issue of the *Southern Economic Journal* under the joint arrangement appeared in January, 1936. Each year since that date four issues—January, April, July and October—have been published. The first board of editors consisted of G. T. Schwenning, managing editor, representing the University of North Carolina; A. S. Keister, editor, representing the University of North Carolina; and Malcolm H. Bryan, editor, representing the Association.⁹ In 1937, Malcolm H. Bryan resigned and H. L. McCracken of Louisiana State University was elected to represent the association as editor. At the annual business meeting in 1939, it was proposed that the editorial plan be changed to a board of six editors, plus the managing editor; that the managing editor and three other editors be appointed by the University of North Carolina; and that three editors be appointed by the association. This proposal was adopted and was put into effect by the executive committee for 1939-40. The board of editors at present is composed of G. T. Schwenning, managing editor; E. M. Bernstein, A. S. Keister and M. C. Leager, representing the University of North Carolina; and H. L. McCracken, Louisiana State University, T. C. Bigham, University of Florida, and Edgar Z. Palmer, University of Kentucky, representing the association.

While the *Southern Economic Journal* started from very modest beginnings, it has at last arrived. It affords not only an outlet for the publication of the writings of southern economists but also a source of supply of current economic literature which is of great value in teaching. It demonstrates what scholars in a particular region can do when they want to do it seriously enough.

The *Southern Economic Journal* has achieved recognition not only in the South but also in the nation. In 1939 there were, in addi-

⁹ *Southern Economic Journal*, January, 1936.

tion to 222 association membership subscriptions, 192 regular subscribers to the *Journal* making altogether a total of 414 subscribers. Of this total 332 or 80.1 per cent were in 15 southern states including Maryland as well as Texas, Oklahoma and Arizona. Every state in the Southeast had from 5 to 64 subscribers. In the Southwest, Arizona had 2 subscribers, Oklahoma 2, and Texas 7. The only states in the Union which did not have subscribers were Maine, Vermont, Delaware, North Dakota, South Dakota, Montana, Idaho, Wyoming, New Mexico, Nevada and Oregon. The number of subscribers in the other states ranged from one in each of the states of New Hampshire, Indiana, Kansas, Missouri, Colorado, Rhode Island, Utah, Washington and Wisconsin to 9 in Massachusetts, 10 in Illinois and 14 in New York. These figures indicate that the *Journal* has become not only south-wide but nationwide in its appeal.

The Southern Economic Association, together with the *Journal* which it has sponsored and developed through the cooperation of the University of North Carolina, "has fully justified the faith of its founders." While the association was started at the height of the prosperous twenties and while it was confronted with serious financial and other difficulties in the depressed thirties, it has survived; it has grown in stature; it has greatly increased the number of its members; it has extended its influence; it has reached adulthood. It has not functioned merely as another organization; it has served as a positive agency to bring together southern economists, to unite them in the pursuit of their common professional interests, to provide them with an annual forum for the discussion of southwide economic problems and policies and to supply them with a clearing house through which to disseminate the results of their thinking and research. While it is regional in its membership, its interests as well as its annual programs extend beyond the region which it serves and encompass the nation.

BOOK REVIEWS

Carter Glass: A Biography. By Rixey Smith and Norman Beasley.
New York: Longmans, Green & Co., 1939. Pp. xv, 519.
\$3.00.

Carter Glass entered Congress in 1902 as a member of the House of Representatives from Virginia. His service has been continuous since that time and has therefore extended over the administrations of seven presidents. The biography under review, prepared by Mr. Glass's secretary, Rixey Smith, and Norman Beasley, traces in considerable detail the entire history of Senator Glass's long public life.

To economists the most interesting portions of the biography are those which evaluate Glass's work in the creation of the Federal Reserve System, and, at a much later period, in connection with the banking reform measures of the Roosevelt administration. His first speech in Congress, delivered in 1908, was against the Aldrich-Vreeland Currency Bill. The bill was wrong in principle, he felt, because it provided merely an emergency currency. It will be recalled that this measure was adopted by Congress after the panic of 1907 and was designed to meet that emergency. The act contained a provision creating a National Monetary Commission. The monumental work of this commission and its report of 15,000 pages Carter Glass's biographers cavalierly set aside as worthless. According to them the report was of no value whatever as a basis of the Federal Reserve System. Senator Aldrich was chairman of the commission. In 1912 he laid before Congress the "Aldrich Plan," a comprehensive measure designed to set up a central banking system on the European model. A companion bill in the House was referred to the Committee on Banking and Currency and to a subcommittee of which Glass was chairman. It was at about this time that Glass began the preparation of his own bill, which was later adopted as the Federal Reserve Act.

At this juncture Woodrow Wilson became President. He and Glass saw eye to eye about many of the banking questions, and

Wilson supported Glass at almost every stage of the long struggle over the Federal Reserve Act. The principal difference between the Aldrich Plan and the bill prepared by Glass and Professor H. Parker Willis was the incorporation in the latter of the regional bank idea, the concept of 12 reservoirs of reserves and credit rather than a centralized system in which the financial power of the nation would be concentrated in a few hands and in one or two eastern centers. In Glass's opinion the most important provision of his bill was the requirement that the reserves of member banks be kept with their regional banks. Under the national banking system the prevailing practice was for banks to redeposit a portion of their reserves in the central reserve cities, primarily New York. Reserve funds piled up in New York banks and, since they were "on call," the banks loaned them largely for stock market operations. The Federal Reserve Bill destroyed this practice. The provision on this matter was largely responsible for the determined hostility of the banks.

The other provision of prime importance in the bill was the elimination of the bond-secured national bank currency and the creation of an elastic note. Glass disliked the idea of making these notes "government issues" but was forced to yield to the Bryan following. Woodrow Wilson contributed to the bill the idea of a capstone, that is to say, the Federal Reserve Board. He and Glass differed seriously about the constitution of this board, Glass desiring banker representation, Wilson being unbending in his opposition.

In February, 1920, Glass moved into the Senate. He supported Wilson in the unsuccessful fight over the Treaty of Versailles and the League of Nations. We must pass over the years that intervened between that distant era and the inauguration of President Franklin Roosevelt in 1933. The most important piece of legislation fathered by Senator Glass in this period was the Glass-Steagall Act (1933). It curbed the use of Federal Reserve credit for speculative purposes, divorced security affiliates from banks, encouraged branch banking, and provided for the Federal Deposit Insurance Corporation.

Senator Glass's attitude toward the New Deal may be summarized by the statement that he has opposed most of Roosevelt's

policies. He thought the closing of the banks in March, 1933, illegal and unnecessary; the devaluation of the dollar and the abandonment of the gold standard meant to him national repudiation—these acts were to him dishonorable and immoral; he opposed the gold embargo; the seizure of the gold in the hands of the Federal Reserve banks he denounced as confiscation and downright thievery; he violently opposed the N.I.R.A. as an unconstitutional invasion of individual liberty; he voted against the A.A.A.; he opposed relief appropriations; he violently resented the attack on the Supreme Court.

The inevitable heaviness of a volume devoted largely to the legislative activities of a man who has played so big a part in current history is occasionally relieved by interesting anecdotes. Some of these illustrate the Senator's command of sulphurous language and the devastating way in which he disposes of opponents and those who arouse his ire. He is surely a gifted man in that particular. The late Senator Huey Long on one occasion actually fled the Senate to escape the scorching fire of Glass's voice. Huey, he said, was "a demagogic screech owl from the swamps of Louisiana rather than the Kingfish of its bayous." Direct quotations from Glass's speeches and letters make up a considerable portion of the volume. Generally speaking, too many quotations mar any literary effort. In this case, however, by far the most interesting portions of the book are the words of Carter Glass himself. They reveal him as a statesman of first rank. Senator Byrd's estimate will no doubt be the ultimate judgment of history, namely, that Carter Glass is "the outstanding senator Virginia has ever contributed to the nation's chief deliberative council."

University of Georgia

R. P. BROOKS

American Tel & Tel: The Story of a Great Monopoly. By Horace Coon.

New York: Longmans, Green & Co., 1939. Pp. x, 276. \$3.00.

A. T. & T.: The Story of Industrial Conquest. By N. R. Danielian.

New York: Vanguard Press, 1939. Pp. 460. \$3.75.

That two books on the American Telephone and Telegraph Company should appear within a few weeks of each other must be attributed to the mass of information concerning America's largest

private corporation accumulated by the Federal Communications Commission in its telephone investigation begun in 1935, the report on which was submitted to Congress on June 14, 1939. Both writers have relied to a great extent on this information. By far the majority of Dr. Danielian's numerous citations are to the proceedings, exhibits, and reports of this investigation. While Mr. Coon uses no footnotes, his reliance upon the same sources is equally apparent. Dr. Danielian, it may be noted, is a member of the staff of the F. C. C.

Mr. Coon's book is a brief, well-written popular treatment. He devotes considerable space to the history of the company and his treatment of present problems is not particularly penetrating. He does, however, note the existence of the chief problems and for a book written for the general reader, such treatment is probably sufficient. From Mr. Coon's study of the Bell System, he concludes that "trust-busting is futile, stupid, and downright dangerous. Monopolies should be encouraged, particularly in the fields of 'natural monopoly,' but they must at the same time be regulated" (p. 264). While he may well have established this conclusion with respect to A. T. & T., the author appears here to be reasoning too glibly from the particular to the general.

Dr. Danielian's book is of a different character. While giving enough history to present a well-rounded story of the company, his interest is primarily in the present social and political problems arising from the power of a giant corporation. It can be regarded as an important case study in the effort to reach a more satisfactory solution to the ever-growing question of the proper relation of government to big business.

In attempting to contribute his part to the solution of this problem, the author investigates in detail many developments within the Bell System which no doubt have their counterpart in numerous other concerns. He treats in succession the means by which management control was originally established, not merely the fact that the company is under the control of a self-perpetuating management; the use of scientific research for industrial warfare rather than social welfare; what the author considers to be "half-truths" (p. 188) concerning the widespread distribution of telephone stock; the vast amount of technological unemployment

arising from the policies of the company; the "long, hazardous, uncertain, and insecure" (p. 242) road to a Bell System old age pension; the gains made by the system during the year the wire communications systems were operated by the government, August 1, 1918, to July 31, 1919; the numerous and effective methods by which the Bell System has built for itself an almost unsullied reputation in the eyes of the general public; the amounts and sources of profits; and the problem of regulating the Bell System, particularly knotty since a large part of its rate base is made up of material sold to the operating companies by the affiliated and as yet unregulated Western Electric Company. In a final chapter entitled "Reflections on Political Economics," Dr. Danielian projects the policies of the Bell System into the entire national economy to see what would have been the result had the Roosevelt administration followed a national policy similar to that followed in its own corporate state by A. T. & T.

The picture presented by Dr. Danielian in *A. T. & T.* is decidedly different from that which is seemingly held by the public. No doubt the company would say of the book, as it has of the "Proposed Report" that it is "incorrect, incomplete, and contained unsound recommendations."¹ However, the author has on the whole well substantiated his position. Some of his arguments, naturally, are weaker than others. It seems to this reviewer that his chapters dealing with the supposed widespread ownership of stock in the company, technological unemployment, and the pension plan fail to reach the high standard of the remainder of the volume. In spite of this weakness, *A. T. & T.* is a book no one concerned with the problem of the position of the giant corporation in a political democracy can afford not to read.

University of Florida

JOHN B. McFERRIN

Economic Problems in a Changing World. By Willard L. Thorp and Others. New York: Farrar & Rinehart. 1939. Pp. xviii, 820. \$3.75.

¹ *Annual Report of the American Telephone and Telegraph Company for 1938*, p. 11. The "Proposed Report" was submitted by Commissioner Paul A. Walker to the FCC. The final report by the FCC to Congress was somewhat less critical. Dr. Danielian repeatedly cites the "Proposed Report" as a reference.

This text is the work of the editor, who is also a contributor, and 9 other economists from nearly as many universities and government departments. The editor feels that the economic system is behaving rather badly because of inertias and interferences in the structure of industry, and because of the pressure of interested groups. Once in trouble, our system fails to make the necessary adjustments, internal and external. The purpose of this volume, as stated by the editor, is to examine the forces at work as they create or solve the economic problems in a changing world.

In the editor's statement of purpose, the social, political, and economic forces, made vital by pressure groups, are given special attention. The fundamentals of economics are noted, but they play a lesser role. In the body of the text, however, the fundamentals are the solid framework of the structure. In this reviewer's opinion, the outstanding contribution of the volume lies in the sections on economic theory and the practical application of that theory. If the economic system is behaving rather badly, there must be something radically wrong with the fundamental principles governing its operations, and any search for causes should cover this field.

The whole volume is divided into 7 sections with from 3 to 8 chapters to a section. The section headings cover the following problems: the consumer, prices, management, labor, capital, government and conflict.

The consumer problem is approached from the point of view of protecting the interests of the consumer as a purchaser and user rather than as a force that directs production and keeps the wheels of industry moving. The interest of the consumer is kept constantly before the reader. Theory and practical problems are nicely blended. This section is well organized and compact; it is an excellent treatment of a difficult subject.

The section on prices treats both theory and practical problems. In this section, the author is primarily interested in the understanding of price behavior and balance. The great adjuster in our economic system is price as fixed in the competitive market. If our economic troubles are due to the failure of the system to make the necessary adjustments, then that failure should be ap-

parent when we examine the price structure. The author finds prices fixed by pure competition and complete monopoly and all the variations in between. He offers abundant evidence that economic forces control prices, and that the system fails to make the necessary adjustments. It is a control akin to group-control. It is this emphasis on controls that gives unity to the many parts of the volume.

The section on management problems considers the general question of business management and the businessman facing competition. These chapters are well written, but this reviewer does not feel that they belong in a volume on economic problems. Turning now to the chapter in the same section dealing with the businessman as a forecaster, we find a considerable part of it given over to the ups and downs of business during the last two decades. A thorough treatment of the business cycle, with its dynamic forces, would have yielded a richer harvest.

The section on labor problems covers the standard topics. The labor problem is a maladjustment problem to be solved by recognizing the forces and adjusting them through collective bargaining, social legislation, and wise administrative procedure. The selection of the material, the organization, the emphasis—all are exceedingly well done.

The capital problem, as the author sees it, is to maintain an equilibrium between the volume of new investments and the volume of current savings. The position of the interest rate on the price scale does not regulate the amount saved or the amount invested. Here again, we see a maladjustment of economic forces and the failure of the competitive price in the form of an interest rate to bring them into equilibrium. The control is not perfect. This section and the price section belong together. The treatment is very similar. There is the same skillful blending of theory and practice, the same clear analysis, and the same objective treatment. In both cases, the emphasis is on the fundamentals.

The last chapter, dealing with the future, is a very straightforward statement of the whole problem. The questions of fair competition, enforced competition, collective action, and centralized control are all discussed. The salient facts on both sides of these questions are presented. The great problem, as the edi-

tor sees it, is to preserve the balance among all of the forces. Perhaps the most hopeful note in the whole volume is that while powerful forces are at work trying to create the sort of futures they desire, real controls have been evolved, and are being evolved constantly.

This volume is a very helpful and stimulating appraisal of our present economic system.

Vanderbilt University

ROBERT A. CAMPBELL

Principles of Economics. Vol. I. By Lewis A. Froman. With the Editorial Assistance of Harlan L. McCracken. Chicago: Richard D. Irwin, Inc., 1940. Pp. vii, 702. \$2.50.

This substantial volume, the first of two, is evidently designed for year courses in economics, and if the forthcoming second volume contains as much material as the first the reviewer would want to meet the class at least 5 days a week throughout the year. The author is in no hurry to plunge into value theory. After 3 introductory chapters he gives 7 chapters to Part II, Production. Part III on Value and Price contains 5 chapters and Part IV on Money, Banking and Exchange closes Volume I with 5 more. Distribution is carried over to Volume II.

There is nothing "sketchy" about this text, especially the first 3 parts. It proceeds slowly and piles up illustrations and examples so that the student is not hurried over concepts that take time to "soak in." Part IV attempts too much in the reviewer's opinion. A course in money and banking should not be crowded into the principles course. The introductory and production chapters are good and the formidable list of questions in Chapter I should prove a good starter to the alert student.

Value and price are handled with commendable freshness and some originality. Three departures in this section are worthy of consideration. The first is the definiteness of the concept of plant capacity. This definiteness results from the second departure—the assumption of variable cost exactly proportional to output until it suddenly and sharply turns up, making total cost do a like sudden upturn. The point of upturn marks the plant's capacity. A spirited defense of this assumption is given (pp. 462-467). The reviewer has long felt that variable cost curves

should not invariably be depicted as rising sharply, thereby sending marginal costs shooting up rocket-like, but this presentation goes too far the other way, the result apparently of the big-manufacturing-plant illustrative bias of the author. Why bother to present the law of diminishing returns and then make so little use of its influence upon variable (and marginal) costs? A good look at a retail store or a farm would have modified this sweeping assumption.

The third departure is the assumption that little can be known about the demand curve as viewed by a producer under conditions of monopolistic competition. It follows that the conditions of monopolistic competition do not lend themselves to long run equilibrium treatment. Any but the shortest demand curve has no meaning. Even if this be granted, it does not, by definition, apply to monopoly.

Exchange (p. 12) should be treated as part of and not an afterthought of production. The concept of unused capacity as presented in Chapter II is of doubtful soundness. It should be made plain (p. 479) that there are no wastes to pure competition. Page 405 is marred by two typographical errors, *prequisities* and *preceptility*. But these are peccadillos. The style is good if not brilliant. The book should be very teachable.

University of Kentucky

RODMAN SULLIVAN

Principles of Economics. By F. W. Taussig. New York: Macmillan Co., 1939. Fourth Edition. 2 Vols. Pp. xxii, 547; xvii, 595. \$6.00.

Those who still seek the "perfect" text for the usual course in elementary economics will get little encouragement from the fourth edition of Taussig's two-volume treatise, the second volume of which recently has been published.

About thirty years have elapsed since Professor Taussig set out "to state the principles of economics in such form that they shall be comprehensible to an *educated and intelligent* person." (Italics supplied.) Yet very little in approach or content has been done to the original work, despite the author's admission that "enormous economic and social changes of the period since 1914" have taken place. All the "developments in theory that have

come during the last twenty-odd years" are waved aside with the comment that "the new speculations and reasonings have not yet been brought to a consensus of opinion," and the author does little about the problem.

Professor Taussig's *Principles*, nevertheless, presents a fine picture of classical doctrines—more suited, as he admits, to the advanced mind. Three new chapters are added, and "radical rearrangement" of the materials on money and banking has been made. Still there is scant justification for the order of discussion and the distribution of space among subjects in certain instances. For example, public finance is omitted, though taxation receives attention in 53 pages at the end of the second volume. Consumption as a separate subject is completely neglected, while international trade, in contrast, occupies an imposing position, requiring seven chapters or 109 pages of the 1100 in the entire work. Book VI is entitled *Labor* though wages, population and other aspects of labor are discussed at various points in the preceding book.

All in all, Professor Taussig's *Principles* remains an important part of economic literature—as it has been for over a quarter of a century. That is a distinguished record, almost unique for textbook writers in the field.

West Virginia University

T. F. HAYGOOD

America Begins Again: The Conquest of Waste in Our Natural Resources.

By Katherine Glover. New York: McGraw-Hill Book Co., 1939. Pp. xv, 382. \$2.75.

Behold Our Land. By Russell Lord. Boston: Houghton Mifflin Co., 1938. Pp. 309. \$3.00.

Although its roots are in the past, conservation has entered the action-program stage on a wide scale only under the New Deal. Here Katherine Glover describes the programs for the building up and maintenance of soil, forest, and wild life resources, for the conservation of minerals, for the conservation of water-power by using it, and for creating the conditions essential to the economic well-being of a region through the T.V.A. Emphasis is placed upon the need for these programs and the general nature of their operation. An extensive bibliography is included.

In *Behold Our Land*, Russell Lord tells the story of nature's building the soil through the ages only to have it wantonly destroyed as new Americans move to the "first wests," to the "midland," and then to the "last wests." It is a tragic story, the more so because the settlement of these vast fertile lands was expected to provide the basis for a truly democratic society characterized by equal opportunity and a high level of material well-being for all. It has not done so, partly because of a misuse of the land through ignorance, but mostly because of a wrong-headedness in individual users and in the body politic which created an inadequate institutional framework for land expropriation and exploitation. The facts, says Mr. Lord, are these:

(1) The parts of this land most worth farming have become scarcer, and in operation less rewarding. As topsoil fails in productivity, private means to hold and restore it fail. (2) Our land as a whole is cut up and stitched into a crazy-quilt of owned, mortgaged, or repossessed holdings which show hardly anywhere a sensible relationship, or recognition of natural watershed and blow-areas. (3) The right of the free American (owner or renter) to stand on his own two legs on his own piece of land and do as he pleases with it cannot be challenged headlong without seeming to deny the very content and essence of the American tradition.

Nevertheless he concludes that:

This soil must be governed. So far as possible, it should be self-governed. We must change our ways of land-use, individually; and where that does not work, enforce change, by democratic decision and action. Surely land is vested with a public interest. This does not necessarily mean that we must abolish private 'ownership' to have land better treated.

These books, each with pertinent photographic illustrations, are designed to arouse the support of citizens for continuing and expanding the conservation program. They advertise "this new calling—soil-healing" and inspire confidence in "planning" as simply foresight in guiding the use of natural resources so that "fulfillment of the hope on which this nation was founded may be realized." Both authors are aware that little has yet been done to rebuild and protect our heritage, that America is only *just* beginning again, that as yet programs are experimental; they are also

aware that social as well as physical engineering is required. New patterns of social structure are needed to achieve old objectives, as suggested in the conclusion in *America Begins Again*:

We live in a magnificent day of new beginnings. In part the changes are a healthy return to old ways from which we unwisely digressed. In part they so completely break with the traditional and accustomed that it is a strain to the imagination to try to grasp where they may lead us. Everywhere throughout the world an old order is breaking up; everywhere the experiment which first emerged in this new country is being put to the acid test.

University of North Carolina

JAMES GILBERT EVANS

Hjalmar Schacht: Central Banker. By Carl R. Bopp. Columbia: University of Missouri Studies, Vol. XIV, no. 1. 1939. Pp. 91. \$1.25.

This study undertakes to analyze a conspicuous personality on the political stage who gives himself the air of a comprehensive, scholarly economist. Economic events of nearly two decades, occurring in Germany but extending their influence over the world, form the background.

The only positive result which can be drawn in the field of economic thought consists in the conclusion that Schacht does not enrich or clarify fundamental ideas, but rather confuses and obscures them. Bopp envisages Schacht's arguments from the angle of economic theory and shows how they are used in the service of political methods. Their function is both to conceal ideas and to foster or justify political aims. It is characteristic of this technique that terms and principles lose their traditional sense and value. Under these conditions we can see also the reason for the inconsistency and the opportunistic shifts of Schacht's economic views. Thus, man and action assume representative significance for this period. In a review of Schacht's *Das Ende der Reparationen*, Salin repudiates this book as an objective historical source because of its tendency for self-glorification and he speaks in this connection of "mental and political bankruptcy" (*Weltwirtschaftliches Archiv*, Vol. XXXIV, 1931). After all, Bopp and Salin are of the same opinion.

According to Bopp, Schacht's main impulses are individualistic ones as the basis of his economic faith is, or was, individualism. His ambition, will for power, longing for career are boundless. The author implies in him even desire for dictatorship, which, however, could not be attained but in a "fourth empire." Schacht dedicates to these interests many of his particular capacities such as reckless energy, adjustability, psychological feeling, art of persuasion. Finally he sacrifices his soul. He writes his books, delivers speeches, invents economic devices and institutions. He deals with the most important problems of money and banking, foreign exchange, capital transfer in relationship to loans and reparations, exportation and self-sufficiency. But he does not mention Helfferich's merits regarding stabilization (who, by the way, at the outbreak of the World War was director of the Deutsche Bank and became secretary of the treasury only in 1915). In financing public expenditures with "Oefa-" and "Mefo-" bills he violates the elements of money-creation, he destroys the unity of the monetary system, and the structure and operations of the "Golddiscont-Bank" are in conflict with the rules and spirit of central banking. All these activities derive from the political needs of the day. Schacht owes his reputation in other countries particularly to his shrewdness and perseverance in negotiating and he achieved, indeed, through his special methods striking successes in regard to Germany's foreign indebtedness.

In the beginning Bopp's critical attitude seems to be not quite plain. But in the course of the study the traits of the rather amusing picture—some of them too often repeated—get clearer and clearer. Ultimately, there can be no further doubt about the true sense of the various epithets he has applied.

University of North Carolina

FRANZ GUTMANN

Money and Banking. By Charles L. Prather. Chicago: Richard D. Irwin, Inc., 1940. Pp. xvi, 873. \$4.00.

By retaining the main divisions of the original text, this revision follows what may be referred to as an orthodox set-up for a course in money and banking. Section one, devoted to the problems of money and credit, contains 11 chapters, which is rather more than is found in most current texts. Chapter 3 of

this section on the value of money is unusual in its placement. It thus serves to call attention to the inevitable differences of opinion as to what material should be covered and how it should be organized in such a course. Mr. Prather appears to have followed the most practical solution by having the text sufficiently comprehensive to permit individual selection and arrangement.

The second main division concerned with commercial banking, foreign exchange, and central banking, contains 16 chapters. The emphasis is on what the commercial banks do and how they do it rather than on internal organization and management problems. The 3 chapters on foreign exchange follow the usual pattern. Those devoted to central banking deal with the organization, operation, and credit policy of the Federal Reserve System. The feasibility of a discussion of credit policy in a beginning course may be open to question but here again there is sufficient text material to permit individual selection.

The third division of 8 chapters contains one each on small loans, savings banks, trust and agency work, investment banking, urban mortgages, and agricultural credits. Two concluding chapters are devoted to foreign banking systems. Obviously the subject matter in the chapters of this entire division is elementary. It raises the question of whether a first course in money and banking should be an intensive study of the country's own system or embrace an extensive survey of all financial institutions. Prather's money and banking is an excellent presentation of the latter point of view.

University of Alabama

JAMES HOLLADAY

Foreign Exchange Practice and Policy. By Frank A. Southard, Jr. and Others. New York: McGraw-Hill Book Co., 1940. Pp. ix, 215. \$2.50.

This little book of about 200 pages is intended to fill a gap in the textbook field. Its avowed purpose is to give an elementary but more detailed analysis of present foreign exchange practice and policy than is contained in recent general studies on international trade. It is directed to both economics students and those engaged in practical foreign exchange activities. Clarity and restraint characterize the book. The first chapter describing the

nature and functioning of the balance of international payments and the sections dealing with forward exchange are particularly well done. For the economics student, however, too much attention is given the description of foreign exchange instruments and the practical credit aspects of financing foreign trade. These sections could easily have been shortened and some attention given to theoretical aspects. Even in a book on foreign exchange practice more theoretical analysis would be welcome.

In the first four chapters the footnotes frequently refer the reader to the discussion of foreign exchange control which lies ahead, but the reader's appetite is far out of proportion to the bill of fare offered. Consequently, the final chapter dealing with foreign exchange policy is somewhat of a disappointment although so far as it goes the discussion is well organized, clear, and up-to-date. For a book of this sort the treatment of exchange stabilization funds is probably adequate. Certainly it is lucid and to the point. But the analysis of exchange rationing and other forms of foreign exchange restrictions is meager indeed. To these significant developments the book gives little more space (pp. 185-199) than is devoted to a detailed description of the instruments used in financing foreign travel (pp. 57-68). Clearing and payment agreements, for example, are dismissed with a few scattered paragraphs. In addition, the uninformed reader may be misled by several statements which are not strictly accurate. For example, on page 196 the writer notes that German clearing agreements involve depreciated exchange rates for German clearing currency. This is not necessarily true. In some cases the gold value of clearing marks has been maintained at the same level as the free mark, that is, at the official gold par. Despite these criticisms the book is reasonably successful in achieving its purpose.

University of Washington

JOHN RICHARD HUBER

The Evolution of the Classical Wage Theory. By Michael T. Wermel. New York: Columbia University Press, 1939. Pp. xii, 190. \$2.25.

This book is an attempt "to present a critical picture of the gradual evolution" of the theoretical speculations on the subject of wages from which the celebrated "iron law" was crystallized.

An outline rather than a comprehensive account, this essay supplies what amounts to a "natural history" of the subsistence wage theory.

This natural history runs somewhat as follows. By 1650-1700 both Dutch and English writers, animated by the belief that men work hardest when threatened by hunger and that low wages make for low production costs and effective competition in international markets, advocated lowering wages in Holland and England, respectively, to the minimal level of subsistence. As a result of the search for methods whereby this policy might be effected, Locke and (to some extent) others concluded that wages tended to approach the subsistence level when workers were dependent and subject to force, whereas Culpeper, Sr. inferred that wages were governed by supply and demand. Child, Boisguillebert, Cantillon, and several of the Physiocrats combined the observation that the laboring population migrates with a supply-demand analysis of wage determination to conclude that the supply of labor always becomes adjusted to the demand for it, generally at a minimal subsistence level. This conclusion was rejected by Condillac and Necker, and by Steuart, who anticipated the theories of both Ricardo and Oppenheimer.

Population theory, Wermel believes, was first formally combined with wage theory by Adam Smith who explained the supply of labor in terms of natural increase rather than in terms of migration. Smith, however, developed a supply-demand theory, not a subsistence theory. Malthus, too, explained wage formation in terms of supply-demand rather than of subsistence in order to allow for the possible influence of moral restraint. Ricardo built upon Smith rather than upon Malthus, unifying the scattered views of the former into the "iron law" of wages. Lassalle added nothing to the Ricardian formulation as such, but did make dynamic political application of this so-called law. The account is not carried beyond Lassalle.

It is difficult, within the space of a review, to comment both critically and fairly upon a study of this sort. Population theory did not evolve everywhere through the three stages indicated in this work; it seems, moreover, that the population factor played a larger part in Physiocratic wage theory than is here assigned to

it. English classical wage theory has never impressed the present reviewer as being as explicit as Dr. Wermel's analysis suggests. Although the subsistence wage theory appears to have developed in the manner described, the step-by-step development can be indicated only in broad outline; for the works of many of the writers examined do not disclose completely either what is original, or the sources of the nonoriginal portions. These comments are not intended as criticisms, or to detract from the usefulness of this well organized, interesting, and quotation-rich addition to the history of wage theory; for, as the author states, his essay is an outline rather than a comprehensive account of the development of the subsistence wage theory.

Duke University

J. J. SPENGLER

Labor Problems. By Gordon S. Watkins and Paul A. Dodd. New York: Thomas Y. Crowell Co., 1940. Pp. x, 1128. \$3.75.

This book is the second revision of a popular textbook previously published in 1922 and 1929 with the revision so extensive as to constitute a new book. The former edition has been enlarged some 402 pages by bringing the various topics down to date, by considerably expanding those sections dealing with conditioning factors; with wealth, income and wages in relation to the standard of life; with trade unionism; and by discussing for the first time the recent labor and social legislation. The book consists of 7 parts, 33 chapters and 1128 pages and is very comprehensive in scope, discussing to some degree very nearly every topic related to labor problems. At the end of each chapter a useful set of questions and a selective list of references are to be found. A distinctive feature of the book is the unusually large number of charts and tables, some 32 charts and 53 tables in all.

The book is rather long for a one semester course but because of the easy, informative way in which it is written, it ought to be manageable. The more theoretical sections, particularly those relating to the theory of wages, hours and technological unemployment which if not weak, are not overly strong, could be considerably strengthened. The descriptive and historical sections are far superior and are very useful. No doubt since the authors intend the book for the student and the layman, and not the

specialist, they try to make the book more factual than theoretical. Yet the serious and capable student will notice and object to this particular emphasis. A number of rather important topics, as for example the case for a shorter workday, are treated too briefly to have much value. Also it seems that giving the subject of trade unionism only 121 pages out of a total of 1128 pages is hardly enough. In terms of the mechanics of the book, it would be desirable if the topic headings were made more conspicuous.

Unlike most persons writing in this field the authors have again included chapters on "Cooperation" and "Socialism," and a section devoted to the labor problems peculiar to the South which will be welcomed by the southern economists. The chapters dealing with "Women and Industry" and "Child Labor" are particularly good as are those dealing with "The Employer's Approach to Labor Problems." One of the praiseworthy features of the book is the greater emphasis placed on the sociological, psychological, personal, institutional and legalistic phases of labor problems. The book is well written, interesting and thoughtful and will prove a welcome addition to the field.

Louisiana State University

ERVIN K. ZINGLER

The Progress of Labor in the United States. By Sigmund Uminski. New York: House of Field, 1939. Pp. 254. \$2.50.

The author of this book is a journalist—one of the editors of the New York *Polish Morning World*. The book itself is an extended news story of the major developments in the field of labor organization in this country since 1935. It is written as would be a Sunday supplement to a paper sympathetic to labor, describing the events of the past week. A fair account of the highlights of the conflict between the A. F. of L. and the C. I. O., of the growth and extension into the South of the combined labor movement from 1935 to 1938, of the entrance of labor into the political arena, of the development of trade-union education, and of other aspects of the labor movement is presented.

The work suffers considerably from minor inaccuracies of fact, from repetition which at times becomes boring, and from a lack of effective organization. Nevertheless, it has the virtue which many more scholarly works lack, of getting the feel of the really

stupendous developments which have taken place in this period. This is probably achieved by the author's journalistic experience and treatment, and by his deep-seated sympathy with the fundamental aims and objects of the labor movement.

Mr. Uminski's work will hold no great appeal for scholars. It probably was not intended to. But it is a more or less effective presentation of labor's gains and labor's mistakes which should be of assistance in union classes, and as a popular presentation from a sympathetic point of view. As such, it is a valuable contribution. Too often the labor movement, which is so colorful and dynamic, loses these characteristics when its story is committed to paper. Whatever may be its faults, this book preserves some of this color and dynamism without losing its balance.

University of North Carolina

FREDERIC MEYERS

Rival Unionism in the United States. By Walter Galenson. New York: American Council on Public Affairs, 1940. Pp. 317. \$3.25.

Probably no phase of unionism has attracted greater attention than has inter-union rivalry and conflict. Nor has any other aspect of unionism been a source of greater concern and embarrassment to its members and friends. The uncomfortable position of the National Labor Relations Board offers a good example of one aspect of rival unionism. Caught between the cross-fire of the American Federation of Labor and the Congress of Industrial Organizations in their competition for the right to represent various groups of employees, the board is frequently forced into the thankless task of deciding between the conflicting claims of the contestants. It is needless to say that few decisions are regarded by the losing side as fair and equitable.

The present volume is concerned with the many ramifications of rival union controversies. Rival unionism is defined as "... the coexistence of two or more unrelated labor organizations actively competing for the control of workers employed or the work habitually performed within a particular trade or occupation." Rival unionism is one aspect of, but is not identical with dual unionism; nor are rival union controversies to be confused with jurisdictional disputes—those "... between competing labor organizations

acknowledging allegiance to a common parent." Lest this distinction be considered more apparent than real, it may be pointed out that the National Labor Relations Board, for example, recognizes it and exercises jurisdiction in the one case, but not in the other.

The volume deals with rival union movements in the United States since 1886 in a summary fashion. Succeeding chapters are concerned with the causes of rival unionism, rival union tactics, common law aspects of rival unionism, and the impact of recent legislation. The experience of various labor boards, particularly the National Labor Relations Board, with rival unions is dealt with at some length. The author concludes that the intricacies of rival unionism should not be left to equity judges, as they have been for the most part, in the past. He favors, rather, their submission to quasi-judicial labor boards, and believes that their removal from the category of disputes over which the National Labor Relations Board exercises jurisdiction would prove particularly disastrous. To protect employers from the demands of unions which have been defeated in elections but which still press for recognition, he would amend the National Labor Relations Act to prohibit picketing and boycotting in connection with strikes by such unions for a period of one year.

Few subjects in the field of unionism are of greater importance than the one selected by the author for consideration. He is to be commended for a useful and scholarly piece of work.

University of North Carolina

H. D. WOLF

Income and Wealth. Vol. III. By the Conference On Research In National Income And Wealth. New York: National Bureau of Economic Research, 1939. Pp. xxiii, 479. \$3.50.

This is the third volume of the series, "Studies in Income and Wealth," being published by the National Bureau. The papers in the first 2 volumes dealt with problems "centering about the meaning and measurement of total national wealth and income." The papers, 7 in all, comprising the third volume, deal with problems connected with the "division of a national total—of either wealth or income—into meaningful constituents;" with the allocation of the national total among groups classified by size

of income or wealth, among the various components of saving and expenditures, and among states. Each paper is accompanied by critical discussion of its contents by one or more participants in the Conference on Research in National Income and Wealth held in April, 1939. This reviewer's comments are confined to indicating the contents of this factually and critically rich volume.

C. L. Merwin summarizes and critically appraises American studies made to date of the distribution of wealth and income, respectively, and suggests ways of improving data gathering and analysis. Charles Stewart examines the method of estimating the distribution of wealth by size of groups through capitalization of income. Drs. Baird and Fine describe how income tax data were used to prepare the National Resources Committee estimate of the distribution of income by size. Drs. Goldsmith and Salant treat the volume and components of saving in the United States in 1933-1937, and the methods of making such estimates. Clark Warburton presents and compares three estimates of the nation's output of commodities and services. R. R. Nathan discusses some of the problems involved in allocating incomes by states. P. H. Wueller examines relations between the incomes of states and their relative capacities to support various services, a relationship fundamental to the formulation of a policy for federal grants-in-aid.

Duke University

J. J. SPENGLER

Das Existenzminimum in Deutschland. By J. Rosen. Zurich and New York: Oprecht, 1939. Pp. 90. Fr. 4.50.

From 1929 to 1933 the German unemployed suffered a reduction of their standard of living unparalleled in England or America. Large groups of highly skilled and organized workers settled down to a permanent state of unemployment, severed from their unions and without even a distant prospect of reemployment. To describe this condition and some of its implications from a characteristic sample is the purpose of the present book.

Rosen's study is based on 90 weekly budgets of German unemployed families, a total of 258 persons, in 1933. The material is highly homogeneous. All families live in Berlin, practically all the men are skilled workers. With an average weekly income

of RM 20.01 per family, RM 7.88 per equivalent adult male, they represent a low, but not the lowest income group. On this level the occupational distribution of the workers is without influence on their expenditures. Purchases and payments have to be made in amounts so small that one weekly budget reflects their distribution adequately. Expenditures are dictated by necessity to such an extent that there is little dispersion. This indicates that the numerical basis of the study, though small, is sufficiently broad to permit the use of statistical methods.

The material is unique in several respects. For the first time a group of unemployed German workers was induced to keep reliable books. Comparative data for their total incomes in 1932 and 1933 are made available and the usual bias toward understating income from secondary and sometimes illegal sources is eliminated. The income level is more than 50 per cent lower than that of the closest comparable study.

After quoting the few comparable studies available and statements concerning actual and possible subsistence levels by relief officials, prison administrators, labor service and medical authorities, the author draws certain conclusions about the practical significance of an "Existenzminimum." Omitting his qualifications, they are: it is possible to depress the standard of living of a modern industrial population permanently in such a way that the group settles down to an organized new standard; there is no practically ascertainable physiological limit to this process; there is, however, a physiological minimum for the individual members of the group if certain social conditions are assumed.

Rosen's study gains additional interest because what was the unwanted result of a great experiment in governmental non-interference has since become a deliberately controlled element in German economic policy. With industrial efficiency unimpaired, the 1933 standard of living left at the disposal of the government a margin of social productivity larger than anything ever envisaged in democratic countries.

University of Kentucky

KONRAD BEKKER

Methods of Family Living Studies. By Robert Morse Woodbury.
Geneva and Washington: International Labor Office, 1940.
Pp. vi, 144. \$1.00.

The study under review is "the first complete guide" to the conduct of inquiries into the living conditions of families; for its preparation all the chief family budget inquiries made during the past 15 years have been examined. Many distinguished scholars have contributed suggestions and materials. Chapters I and II deal with the purposes and the planning, respectively, of family budget or living studies; III and IV, with the methods of collecting, and the nature of, the data; V, with the analysis and appraisal of results. Chapter VI is devoted to problems connected with food consumption and dietary surveys. The Appendix includes 6 valuable tables devoted to the analysis of the principal characteristics of the family living studies used in this report.

Duke University

J. J. SPENGLER

Textile Markets: Their Structure in Relation to Price Research. Report of the Committee on Textile Price Research to the Conference on Price Research. New York: National Bureau of Economic Research, 1939. Pp. xx, 266. \$3.00.

Perhaps not since the days of Kay and Arkwright have the textile industries been more strikingly dynamic than at the present time. Advances in technology of very considerable cumulative force continue; changes in consumer preferences give rise to rapid shifts in the character of production; the swift growth in the output and in the varieties of use of various synthetic fibers seems destined to destroy the barriers that have separated the older textile industries. A silk industry as such, for example, no longer exists. Silk looms and cotton looms compete in the weaving of rayon. All-rayon fabrics, rayon-cotton mixtures, and rayon-wool mixtures compete with each other and with older cloth constructions. A maze of structural and competitive interrelationships conspire to draw all of the fiber-fashioning industries together.

The present volume, which is the second formal publication of the Conference on Price Research, provides an admirable guide to the highly complex market structure within which the textile industries operate. The fiber markets, including the markets for processed fibers such as wool and rayon tops, the yarn, thread, and cordage markets, and the markets for gray and finished goods are analyzed briefly yet with illuminating detail. The marketing of fabricated textile products is more generally considered. Em-

phasis is placed, of course, upon the price-determining forces at work in each market for each product covered. Not the least valuable aspect of the work is the care and precision with which terms are defined and the significance of price quotations indicated.

The second portion of the volume is devoted to a description of significant areas of research on the behavior of textile prices. Students of price formation will find here a mine of fruitful suggestions for research, for "within the bounds of the textile industries may be found examples of virtually every kind of price mentioned in modern economic literature . . ."

Washington, D. C.

H. M. DOUTY

The Invisible Tariff. By Percy W. Bidwell. New York: Council on Foreign Relations, 1939. Pp. ix, 286. \$2.50.

In the past decade, foreign trade has been subject to comprehensive controls in every important country. Import quotas, clearing agreements, foreign exchange controls, and other devices have been widely used and have received widespread publicity. But along with these better known devices, which are usually undertaken to balance trade, is another type of control which has been labeled "indirect protection." These indirect controls may be divided into two types: those concerned with implementing protectionism (customs administration, marks of origin, anti-dumping measures, standardization of grades and qualities, etc.) and police measures to protect health and security (plant and animal quarantines, control over drugs and narcotics, sanitary restrictions, etc.). It is indirect protection with which Professor Bidwell is concerned and which he describes as being an "invisible tariff."

Bidwell notes that "today administrative measures are more comprehensive than the visible tariff, since they affect goods which are not on the free list as well as those which are dutiable." Thus in this field as in security regulation, banking, labor relations, etc., a wide area has developed in which administrative action plays a prominent role.

In Part II, which is devoted to the various police measures affecting imports, domestic regulation of the affected products is also discussed. While imports are affected by these measures, their

regulation is usually part of a comprehensive control which affects domestic products as well.

One type of action which has been described as creating an invisible tariff and which is not discussed, is currency depreciation. Its exclusion can be justified, however, since it affects *all* products by relatively the same proportion compared with the measures discussed which are devoted to particular situations or groups of products.

The student and teacher will find in this volume a valuable discussion of a too often neglected phase of foreign trade control and one which is found to be of increasing importance in the intensely nationalistic world of today.

New York University

JULES BACKMAN

Transportation: Economic Principles and Practices. By Emory R. Johnson, Grover G. Huebner, and G. Lloyd Wilson. New York: D. Appleton-Century Co., 1940. Pp. xi, 666. \$4.00.

Such experienced writers as Messrs. Johnson, Huebner, and Wilson could be counted upon to write a useful book in the field of transportation, and this volume is no disappointment in that respect. This text follows in its general plan the authors' *Principles of Transportation*, which was written in 1928. The new volume, however, is more than a revision, since it contains much that is new. The present text, though shorter by 100 pages than the former, covers each of the five kinds of transportation; viz., railroad, air, pipe line, water, and highway. Treatment of each phase of transport is reasonably complete, even to a brief discussion of taxis and taxi fares. The textual matter is well arranged. It contains a good mixture of both principles and practices, and for this reason should be useful to both the student and the business man.

For the student of economics a greater discussion of the matter of overhead costs would have seemed desirable. The illustrative materials could have been better chosen. A map showing rate territories of the country, for instance, would appear to have more value than the one used showing railroad operating districts and regions of the United States. The space and expense devoted to printing copies of railroad bills of lading might easily have been

allotted to something else because these forms are easily secured from railway freight offices.

It is to be regretted that the authors did not devote some attention to the interterritorial freight-rate question. The book closes with a well-considered discussion of a national transportation policy.

Alabama Polytechnic Institute

JOHN H. GOFF

Industrial Geography. By Charles E. Landon. New York: Prentice-Hall, 1939. Pp. xxviii, 811. \$4.00.

One of the most difficult subjects to teach satisfactorily within one college course is the geography of the world, even though it is limited to economic or industrial phases. The broadness of the subject has resulted in many universities utilizing the course both as a training ground for young instructors as well as an introductory college course for more advanced work in economics and business administration.

As a corollary, one of the most difficult textbooks to write satisfactorily is one covering the entire industrial organization of the world. Most books on industrial geography are criticized because they contain too many uncoordinated facts, or because they are so theoretical that readers are left with a vague or incomplete picture of the actual industries in the various countries.

Professor Landon handles this conflict between factual data and theoretical discussions in a commendable manner. He has designed the book primarily as a text for a college course following one in the fundamentals of economic geography. It is so written, however, that it is thoroughly satisfactory for a general course on the natural resources and industries of the world, and at the same time, it is sufficiently comprehensive to serve as a standard reference for the businessman and professional reader.

The author in this volume gives emphasis to the production of goods—creation of form utility—attempting to eliminate those phases of economic geography concerned with the creation of place- and time-utility. Since such a distinction is often impossible to make, it is perhaps more correct to say that the author's viewpoint is one of emphasis rather than one of separation, with basic attention given to those industrial activities creating physical goods.

The organization of the book follows the customary, and probably most logical, procedure. The first half is devoted to a presentation of the industries of the United States on an industrial-unit basis. In the second half of the book, the rest of the world is covered, country by country. Canada—"like the United States, an American extension of Northern Europe"—is next considered, followed by the British Isles, Europe, on through Asia, Australia, and concluding with South America and the Central American countries.

Illustrations throughout the text are well selected. Charts and maps are unusually effective. They are simple enough to be readily understandable, unburdened by complex structures and irrelevant detail with which graphs are so often complicated, and the author deserves congratulation on their choice and construction. A well selected, classified, and usable bibliography is included.

Conservation is handled in the modern manner, and considerable emphasis is given to natural resources. The United States, it is pointed out, "could maintain a high standard of living and accumulate wealth in spite of our mistakes. But that day is passing; . . ." While this viewpoint can be questioned by comparing many measures of standards of living for the twentieth century with those of the eighteenth and nineteenth centuries, it is nevertheless the usually accepted conclusion. Following this theme, the first picture in the book shows an exceptionally depressing scene of forest resource destruction on Mount Mitchell, North Carolina. Fortunately such views of destruction are unusual, characteristic only of very small areas. Progress in improving manufacturing methods, in chemical and mineral research work, in agricultural mechanization and production, as offsets to the evils usually associated with resource depletion, is only occasionally emphasized—perhaps wisely as a means of stressing the problem of conservation.

The subject matter of the book has been carefully chosen from dependable sources, and current statistical data are remarkably accurate.

*Bureau of Agricultural Economics,
Clemson, S. C.*

WILLIAM T. HICKS

The Background and Economics of American Papermaking. By Louis Tillotson Stevenson. New York: Harper and Brothers, 1940. Pp. xiii, 249. \$3.00.

American paper making as one of the vital industries of this country is shown by the author to be subject to classical economic laws. Demand and supply determine prices of paper according to the principle developed by Alfred Marshall, and the paper industry, the author claims, is so constituted that other conditions are impossible. Monopolistically determined prices are almost unknown, as the industry is "self-regulatory."

Moreover, it is naively pointed out, the paper industry is harmfully affected by the absence of a protective tariff on newsprint and wood pulp. A tariff is desirable because the industry is vested with a public interest. As a whole, papermakers have cooperated with the government on matters of national defense, but "the policy of conservation of natural resources has adversely affected the paper industry in this country"—the conservation movement brought about the tariff on newsprint.

Along with his ingenuous economic interpretation of the paper industry, the author gives valuable historical material to support his thesis. Numerous references are listed, and the book is profusely annotated.

Social control of the paper industry, the author concludes, should be only through existing institutions—"self-regulation and the Sherman Anti-Trust Law." Further social control, unless it is to plug "the hole in the tariff wall," is economically unsound in an industry operating under the law of demand and supply. Monopolistic prices in the paper industry are just simply unthinkable—to paper men.

Clemson, S. C.

WILLIAM T. HICKS

The Structure and Growth of Residential Neighborhoods in American Cities. By Homer Hoyt. Washington: Federal Housing Administration, 1939. Pp. 178.

The principal objectives of this monograph are two in number: first, to furnish "the tools for analysis" and to develop "the principles of general application that may be used in the intelligent examination of the internal structure and growth of American cities"; and second, "to develop principles of urban structure and

growth that may give an insight into the causes of the present arrangement of land uses and residential neighborhoods in American cities." No one who reads this monograph carefully will deny that the author has adhered to these objectives and by so doing has made a distinct contribution to the literature on urban economics and sociology.

The book is divided into two parts. Part I is concerned with the structure of residential neighborhoods in American cities. It is composed of six chapters. In analyzing the ground plan of cities, the segregation of urban land uses and the composition of urban dwellings and their inhabitants, it develops new techniques of analysis and presents patterns of residential rent areas. It also lays the foundations upon which Part II, consisting of four chapters and dealing with the growth of residential neighborhoods in American cities, is based. In addition to these two parts which are interspersed with unusually interesting maps, tables and charts, there is an extended appendix consisting of three chapters and a map supplement of 40 pages.

The author of this monograph has produced an excellent piece of work. He has followed a methodology and utilized sources of materials which no other author, so far as this reviewer is able to determine, has ever followed or utilized. He has gone into many aspects of urban economy which hitherto have not been touched. He has made use for the first time of the voluminous data collected from over 200 American cities through the cooperative efforts of the Works Progress Administration, the Central Statistical Board, the Federal Home Loan Board, the Housing Division of Public Works Administration and the Division of Economics and Statistics of the Federal Housing Administration. He has ably analyzed these data and drawn conclusions therefrom which will be of vital interest to every student of urbanism. Moreover, what the author has accomplished will be a useful guide to other investigators "in the further analysis of urban conglomerates of man-made structures."

University of Florida

WALTER J. MATHERLY

Statistical Dictionary of Terms and Symbols. By Albert H. Kurtz and Harold A. Edgerton. New York: John Wiley & Sons, 1939. Pp. 191. \$2.00.

The need of a dictionary of statistical terms has long been felt by statisticians and readers of statistical literature. Such a dictionary should be judged by its completeness, the accuracy and clarity of its definitions, the discrimination with which it selects best usage, and the facility with which terms and concepts can be matched. In the opinion of the reviewer this dictionary is in general successful in meeting these criteria, though some exceptions are mentioned below.

Nearly all of the terms that one is likely to encounter are listed, including such terrifying ones as abac, heteroscedasticity, homoclisys, isopleth, isotropic, leptokurtic, polychotomy, and tetrad. A few which are omitted are coefficient of separate determination, confluence analysis, cumulant, fiducial limit, Helmert's criterion, interaction, isorropic, level of significance, primary source, purposive sample, semi-invariant, stochastic, Tchebycheff's inequality, and variance ratio.

The definitions of statistical terms are intended to illustrate current usage; and where there is more than one meaning, the preferred usage is indicated. The definitions were reviewed by a board of 30 eminent statisticians, and little quarrel can be found with most of the definitions. However, the common meaning of an index as a collective noun referring to a series of index numbers is not given. Aggregative index number is defined as if it could refer only to a price index number. The preferred definition of double entry *table* is scatter *diagram*. On page 54 inductive is used synonymously with *a priori*. Deviation is so defined as to preclude the concept of a deviation from a regression line, while the term residual is reserved for that concept.

It would make the volume a little more useful (and more bulky) if along with general terms, their specific meanings when modified by certain adjectives were also given. For instance, under ratio one finds no reference to the terms hybrid ratio or size ratio. These terms are listed elsewhere, and although they seem to be very nearly synonymous, there is no cross reference between them. Likewise the word determination is not listed, although under C will be found coefficient of determination, and coefficients of direct, joint, part, and total determination. If one reads the definitions of these terms, he will note that the coefficient of part

determination is the square of the coefficient of part correlation, but the coefficient of total determination is not the square of the coefficient of total correlation, but the square of the coefficient of multiple correlation.

No attempt has been made to make a complete list of symbols. Such an attempt could hardly be useful, since as currently used one symbol may have many different meanings and many symbols are used to indicate the same concept. However, a limited number of symbols are given, and these are selected from an internally consistent set devised by Dunlap and Kurtz and published in their *Handbook of Statistical Monographs, Tables, and Formulas*. These do not always conform to the most common usage. Thus, it is a little confusing to see n given as the symbol for the number of independent variables, when its customary meaning is degrees of freedom. Possibly because one of the authors is a psychological statistician, there seems also to be a little tendency to use educational or psychological terms in preference to more general terms. For instance, X is used as the symbol for gross score rather than observation. This psychological flavor is perhaps the greatest weakness of the book.

University of North Carolina

DUDLEY J. COWDEN

The Variate Difference Method. By Gerhard Tintner. Bloomington, Ind.: Principia Press, 1940. Pp. xiii, 175. \$2.50.

This work comprises a summary of the variate difference method of time series analysis as developed to date, particularly by O. Anderson and R. Zaycoff of Bulgaria, and certain additional studies by the author on the application of variance analysis in testing the significance of the results. It should not be thought that the variate difference method is a complete set of tools for analyzing time series. It appears to the reviewer to be, instead, a step which perhaps should have a place as a part of the usual analysis methods.

"The variate difference method proposes to give a statistical method for answering this question: Beginning with which difference can we be reasonably sure that we have more or less eliminated the nonrandom element or mathematical expectation? The method consists in calculating the variances (squares of stand-

ard deviations) of the original series and of the series of successive finite differences. Then the difference between variance of two successive series of finite differences is compared with its standard error" (p. 8).

The results of the method are thus to establish the degree of curvature discoverable in the nonrandom factor in various parts of any time series. The author seems to have two uses of these results in mind. First, if a Whittaker or a Macaulay smoothing formula is to be used, the degree of complexity of such formula would be established through Tintner's methods. The second use seems to be in the analysis of the random variations and their relationship to the sampling errors of the nonrandom elements such as the trend, seasonal, cycle, and the correlation between different time series.

The pace of the book is uneven. Sometimes the author explains at length the most obvious points. "Since we have already calculated the squares, it is very easy to get the fourth powers which are simply the squares of the squares. All we have to do is to take the squares of differences which have already been calculated, and then square them again with the help of a table of squares or a calculating machine" (p. 52). At other times complex steps are passed over with little explanation, as for instance in the obtaining of standard errors modified by kurtosis, on page 70. Many pages of the book are covered with tables of fairly simple functions which the statistician would ordinarily expect to calculate for himself when the need arises rather than to interpolate in tables.

In general this is a very technical work in statistical method, the true usefulness of which will only be developed after several years of trial by statisticians.

University of Kentucky

EDGAR Z. PALMER

Social Security and Pay-Roll Tax Accounting. By J. F. Sherwood and John A. Pendery. Cincinnati: South-Western Publishing Co., 1940. Pp. 256. \$2.60.

Despite the variety of available material which deals with federal and state social security legislation, there has been rather a dearth of information which, in condensed fashion, gives to

management the means of intelligent compliance with the laws and to students of the legislation a summary analysis of their detailed workings. From the outset management has been faced with the problem of digesting the meaning of the imposing mass of reports, instructions, rules, regulations, etc. which have issued steadily from both the Social Security Board and the state unemployment compensation agencies. The present book, therefore, should fill a long-felt need for a concise, clearly written summary of the operation of the several laws as they affect both the employer and the employee.

The authors intend their volume to be used as a text. Its purpose is "to provide information of both social and vocational value to the student who expects to become either an employee or an employer after leaving school." But it would seem that this objective is overmodest, for a book of this kind should also prove of inestimable value to employers now in covered employment. Moreover, the employers' use of this volume would undoubtedly redound to the benefit of the administrators of the laws, both federal and state, since one of their greatest problems is still the education of covered employers in proper compliance.

The text is divided into nine lectures covering a general description of social security legislation, federal old age insurance, unemployment compensation, social insurance for carriers, forms and reports required, records required, and an accounting procedure. Throughout the text the provisions of the original act (1935) have been carefully collated with those of the Social Security Act amendments of 1939. The lectures give a brief but adequate interpretation of the several laws, including a description of their scope, benefits to be derived, the meanings of various terms used, model illustrations of tax computations, and state and federal regulations covering points which have been most frequently in question. The lecture on accounting for payroll taxes sets forth a simple, yet effective, method of recording the employer's wage payments and tax liability. In addition to the lectures there is a practice problem designed to train the student in recording wages and taxes imposed thereon by both the federal and state laws.

Because of its excellent organization, lucid style and numerous

illustrations, this text should prove extremely teachable. Its use certainly need not be confined to courses in accounting. The content of the book is considerably wider in scope than the title would indicate. It should prove readily adaptable to courses in public finance, taxation, labor economics, or to any other field in which the subject of social insurance is of importance.

University of North Carolina

LANGSTON T. HAWLEY

Industrial Organization and Management. By Ralph Currier Davis. New York: Harper and Brothers, 1939. Pp. xxii, 636. \$4.00.

Students of industrial management will welcome this new text by Professor Davis. This volume is something more than a revision of his well-known text, *The Principles of Factory Organization and Management*. It may be described as a merger of that volume with his briefer work, *Business Organization and Operation*.

A characteristic feature of this text is the emphasis given to control in organization and operation. As the main functions of the industrial enterprise are described care is taken to define and distinguish the various activities, to explain their interrelationships, and to relate them to the general administrative unit for proper supervision. With attention given mostly to organization and control and thus correspondingly less to factual details, it avoids the criticism of many such works, that they are overburdened with technical information that might well be relegated to engineering handbooks and statistical tables.

The plan of organization structure is conceived of in terms of the line-staff type. By designating activities as either line or staff, as the case may be, it is possible to show clearly their subordination to other activities and to the organization as a whole. Moreover many of our large-scale enterprises, perhaps the majority, are organized in accordance with line-staff principles. However, to treat organization structure as of only the line-staff type is open to criticism. Both the departmental and the functional types may be employed in accordance with sound principles and effective practice. After all, the activities of an organization are not line, staff or functional because of their inherent nature but rather because of the physical facilities, the working conditions, the

characteristics of the personnel, and the objectives of the enterprise.

A noteworthy feature of this text is a description of production control in the continuous **process** industry. Many of our texts still describe production **control** entirely in terms of the special order, or job-order type, whereas industry in general has inclined more and more to the continuous process. This text supplies therefore a real need.

Finally, from a pedagogical standpoint, adequate questions and problems follow each chapter, and a well-selected bibliography is appended, making the text suitable for advanced study.

University of Alabama

E. H. ANDERSON

STATE NEWS

ALABAMA

Industrial activity in Alabama during the second quarter of 1940 appears to have checked the decline which set in at the first of the year. After declining to 5.1 per cent above normal in March, the industrial activity index prepared by the University of Alabama Bureau of Business Research recovered to 9.0 per cent above normal in June. The Standard Statistics index for the nation as a whole rose in the same period from 82.2 per cent to 90.5 per cent of normal. Although the Alabama index has not shown the gains made by the index for the United States, it has been fluctuating during the past several months at a considerably higher level. These indexes make allowance for trend and seasonal variations.

Physical volumes of production of all industrial activity lines except cotton consumption ran considerably ahead of the same period in recent years. All time peaks for the six-month period were recorded by electric energy consumption and steel ingot production. Coke production for the same period was exceeded only by 1929 and cotton consumption by 1937.

Building construction made seasonal recoveries over the first quarter of 1940, but was slightly below 1939 activity in the second quarter. Employment and payrolls of reporting firms showed a slight decline during April and May. Improvement of 15 to 20 per cent is recorded over the same months of 1939 when, however, labor difficulties in coal mining caused a sharp curtailment.

Sales activity continued to show sizable gains over 1939. For the first 6 months of 1940 passenger car sales were 15.3 per cent above the corresponding period of 1939; gasoline sales were 6.6 per cent above a year ago; and retail sales of reporting independent stores were 7.7 per cent greater than in 1939. Bank debits in 4 cities of Alabama were 16.3 per cent above the first half of 1939.

The Bureau of Business Research of the University of Alabama

has initiated the issue of indexes of sales activity of Alabama retailers which are based upon the monthly sales tax payments of identical firms. The Alabama State Department of Revenue is cooperating in furnishing the basic information. The reports of approximately 3,000 firms are used in preparing the indexes which show month-to-month changes in sales volume. The data are broken down both on a trade and a geographic basis.

A special session of the state legislature adjourned early in July, 1940. The main purpose of the session was to approve and enact into law a new code for the state of Alabama. A special joint committee of the two houses was appointed at the preceeding session to prepare the new code. The new code as prepared and approved is very voluminous. The arrangements of topics follows somewhat that of the federal code. It is to be published in some 10 volumes. The last official code of the state was issued in 1923 and did not include a complete codification of revenue and education laws. The present code is designed to include all the laws of the state.

The legislature made one important change in the laws of the state when it enacted as part of the code provisions for establishing an experience rating system to apply in determining the payroll tax rates to be paid by both employers and employees under the Unemployment Compensation Act. The system adopted is of the type generally known as a benefit wage system. It will become effective April 1, 1941.

Students of employment problems will be interested in the attempts of the Alabama State Employment Service to find jobs for more than 500 workers who were thrown out of employment by the closing of the large lumber mill at Lockhart, Alabama. The mill was the only important industry of the town. According to a statement of C. F. Anderson, Director of the Alabama State Employment Service, the state office immediately called upon the 26 division offices of the service to give this particular placement problem their special attention. Every employer of 40 or more workers in the forest products industry was contacted. In addition related industries which might be interested in the type of workers displaced at Lockhart were approached. Detailed information about the qualifications of each worker, his age, his

merit rating with the company, length of service and his weekly or monthly wages was prepared in mimeographed form and submitted to prospective employers. The employment services of Florida, Mississippi and Georgia were contacted and cooperated in the efforts to find places for the workers. Director Anderson reports that a very considerable degree of success has been attained by these efforts.

University of Alabama

H. H. CHAPMAN

FLORIDA

The most spectacular events of economic importance to Florida are in connection with the national defense program. Existing defense establishments in the state are being enlarged and new ones constructed. Among the more important developments are the construction of the \$20,000,000 Southeastern Naval Air Base at Jacksonville and the \$14,000,000 MacDill Field at Tampa, the latter to be used as headquarters for the Army Air Corps' third wing. The Naval Air Base at Pensacola is being greatly enlarged, some \$10,000,000 having been allocated for this project; and \$4,000,000 is being spent on the rehabilitation of the submarine base at Key West.

The report of the Florida State Treasurer for the fiscal year ending June 30, 1940, indicated total revenues of \$75,491,093 and total expenditures of \$73,046,390. This is the first time in the history of the state that revenues have passed the \$75,000,000 level. In the fiscal year ending June 30, 1939, revenues were \$68,189,441 and expenditures \$66,272,170. Of the 1940 revenues, the gasoline tax accounted for some \$25,000,000. While these figures would seem to indicate that the state's finances are in good shape, the fact that an exceedingly large part of the collections is earmarked for special funds has resulted in insufficient revenue for the general fund. At the date of the treasurer's report, supply bills for the past 3 months were unpaid.

The Brookings Institution has been employed to make a survey and to recommend changes in the tax system of the state. The study, which is to be completed in time for use by the 1941 General Assembly, is being financed by 18 state-wide organizations. This

move has been endorsed by Spessard L. Holland who recently received the Democratic gubernatorial nomination.

The Florida Bankers Association and the General Extension Division of the University of Florida conducted the third annual short course for bankers at Gainesville, May 27-30, 1940. The general topics, to each of which four lecture and discussion periods were devoted were: "The Bank and Its Place in the Community," "Bank Operating Costs," "The Place of Bond Accounts in Commercial Banks," and "Consumer Credit and Installment Loans." In addition, 4 important Florida industries, citrus, forestry, livestock and the tourist industry, were investigated from the standpoint of banking opportunities existing in these fields. The conference was well attended by bankers from all sections of the state.

University of Florida

JOHN B. McFERRIN

GEORGIA

One of the most significant organizations in Georgia is the Citizens Fact-Finding Movement. This enterprise was begun several years ago by Miss Josephine Wilkins, one of the leading members of the Georgia League of Women Voters.

The movement is sponsored by 17 state organizations, including all of the luncheon clubs, the League of Women Voters, the Georgia Press Association, the Georgia Education Association, the Georgia Congress of Parents and Teachers, and the United Georgia Farmers.

The work of fact-finding is done by a group of 16 consultants, chosen for their exceptional knowledge of and interest in the subjects covered by the monthly reports. The consultants meet once a month and hear the tentative draft of the report on a specific subject. The tentative reports are then revised and published.

In 1937-38, 12 reports, known as the "Inventory Series," were issued, covering such subjects as natural resources, agriculture, industry and commerce, health, education, public welfare, the penal system, the political system, and the tax system. In the period 1939-40 a second series, called "Possible Solutions," was issued, the subjects being the same.

Miss Wilkins and her organization have shown extraordinary ability in getting these publications before the people, the instrumentalities being the luncheon clubs, the various forums, and the newspapers. The mailing list is now upwards of 12,000.

University of Georgia

R. P. BROOKS

KENTUCKY

The 1940 act to extend public aid to needy blind persons and dependent children has not been put into operation pending an opinion from the state's court of last resort relative to its constitutionality. The Attorney General has given an opinion that the doubts concerning the standing of the law are so grave that enforcement should be held in abeyance. Meanwhile the fund is being earmarked. The act granting pensions to Court of Appeals judges has also fallen afoul the courts. One section was held invalid by the Franklin County Circuit Court and Governor Johnson has appointed a Special Court of Appeals to try the case. A decision is expected in October. The Franklin Circuit Court also held invalid a section of the 1940 labor act which required time-and-a-half pay on the seventh day for certain employes who work in excess of 40 hours during 7 consecutive days. The classification of employes was held to be arbitrary (excluding hotel waiters and including restaurant waiters, to be specific). The case may be appealed.

The state general fund received unexpected heavy receipts in July, the result, apparently, of heavy purchases of liquors and automobiles to beat the deadline of increased federal taxes.

University of Kentucky

RODMAN SULLIVAN

LOUISIANA

The economic activities of Louisiana have experienced some unusual reverses—almost catastrophes—during the summer.

Heavy rains fell almost daily for more than 60 days. Such crops as cotton, corn, sugar cane, and vegetables were greatly damaged. The yield will be cut from 50 to 70 per cent below a normal harvest. Since the price of most of the products is set by a supply from a much larger area than this state, the greatly reduced produce will not cause a corresponding rise in prices.

In addition to the above, southern Louisiana is confronted with much more serious losses than crop reductions. The coastal storms and rains have completely destroyed this year's rice crop in a large portion of the rice belt; the oyster industry has been practically destroyed for a period of from 2 to 4 years; the fur industry will require a period of from 3 to 5 years for recovery; and the cattle industry which has been recently developed was greatly damaged. According to estimates, 75,000 cattle lost their lives. From August 8 to 12 many of the southern Louisiana towns were inundated by water—in many cases as deep as 8 feet.

Louisiana taxpayers are beginning to undergo several important tax changes effected during the last legislative session. The state income tax was raised and some 18 or more new taxes were levied. The new taxes were designed largely to take the place of two important decreases: the abolition of the sales tax—the sales tax goes out December 31, 1940—and the greatly reduced automobile license tax—the license tax on automobiles has been reduced to \$3.00 per automobile.

Louisiana State University

S. A. CALDWELL

MISSISSIPPI

The metamorphosis of Mississippi's agricultural economy is now in rapid process. The force of the movement can be readily appreciated by any observer who may have travelled over the state, and particularly the delta section, not more than 5 years ago.

Ever since the delta, which consists of 13 counties of sediment soil along the east bank of the Mississippi River, was first brought into cultivation, it has been known strictly as a cotton country—and practically no other crop of moment was produced in any of those counties. Until 5 years ago, the delta cotton planter produced little or none of his feed or food stuffs.

Between 1932 and 1939 the cotton acreage of the state as a whole was reduced from 3,897,260 to 2,524,423 acres. Most of this reduction took place in the delta. But along with this reduced acreage the yield of lint cotton increased from an average of 147 pounds to 300 pounds per acre—or, for the state, from a total of 564,353,000 pounds to 754,718,000 pounds. Simultaneous with this change in the cotton culture there have been equally

important changes in other crops. Grain, alfalfa, and soy beans are all becoming important delta crops. For the state as a whole, the oats acreage increased from 86,905 in 1938 to 123,000 acres in 1939, substantially all of which was in the delta. Several grain elevators have recently been built in that part of the state—and generally speaking, practically every large plantation owner operates a combine, or some other kind of modern grain harvesting machine.

Increased acreages are also devoted to alfalfa, corn, lespedeza and cow peas. Although the state as a whole is giving increased attention to a better balanced agriculture, the trend is of particular importance to the delta section, because while formerly it imported practically all of its feed stuffs, it is now not only producing its own feed stuffs, but within the next year or so, will produce a net surplus for export.

Soil conservation and restoration are also receiving increased attention. In 1936 there were 28,645 acres within the state with an average of 750 feet of terracing per acre; in 1939 there were 56,110 acres. In 1936 there were 468,000 acres of seeded winter legumes; in 1939 there were 821,000 acres. Up to August 1 of this year, the farmers of the state had ordered 2,045,200 pounds of Austrian winter peas for soil building purposes. These peas are bought from the United States government at approximately \$4 per 100 pounds in the form of a deduction from the soil conservation checks received from the government. In 1936 the state had 11,594 acres of seeded pasture land; in 1939 there were 43,000 acres.

The trends in the raising of cattle and livestock are no less important than those in other crops. Both dairy and beef cattle shows, and livestock shows are being encouraged through state financing. Statistics on the dairying business are very significant. The first condensory was built in 1927 and processed 2,295,260 pounds of butter fat in that year; in 1937, there were 4 condensories, and they processed 4,678,722 pounds of butter fat, and in 1938 those 4 condensories processed 6,201,683 pounds. The milk purchases in 1937 were 100,000,000 pounds, and in 1938 were 130,865,395 pounds.

The first cheese factory in the state was erected in 1927, and produced in that year 197,536 pounds of cheese. There were 14 factories in 1937 with an output of 9,316,633 pounds, and 16 in 1938 with an output of 11,620,338 pounds. The manufactured butter in 1918 was 2,947,948 pounds, in 1937 it was 6,277,254 pounds, and in 1938 it was 7,272,813 pounds.

These facts undoubtedly indicate not only a revolution and a better balance in the agricultural economy of the state, but suggest farm unemployment, social and other problems that must follow in its wake, as well as problems of a much greater scope growing out of a stronger competition from the southern farmers with farmers of other parts of the country.

University of Mississippi

ROSCOE ARANT

NORTH CAROLINA

The growers of cigarette tobacco have been hard hit by the war. Last year, with no crop control, there was a production of approximately 1,100,000,000 pounds, compared with crops of 866,000,000 in 1937 and 786,000,000 in 1938 under crop controls. When the war forced British buyers to suspend operations in September of last year, marketing conditions were so demoralized that markets in Virginia and the Carolinas were closed for several weeks. After the growers had adopted a control program for the 1940 crop, the markets were opened and the Commodity Credit Corporation advanced funds for the purchase of about 175,000,000 pounds for the account of British buyers. In spite of these steps, however, prices for the 1939 crop averaged around 15 cents compared with an average of 22 cents for the 5 years ending in 1938.

Under the 1940 control program acreage was reduced by nearly 40 per cent and the July estimate predicted a crop of 676,000,000 pounds. There was on hand, however, a surplus of about 650,000,000 pounds, the largest in history. As the 1940 marketing season approached there were prospects of even worse prices than in 1939 unless drastic measures were adopted. In July, 1940, growers took the unprecedented action of adopting, by an overwhelming vote, a three-year control program with a quota of 618,000,000 pounds for each of the 3 years. The Commodity Credit Corpora-

tion then arranged to advance to buyers sufficient funds to enable them to purchase tobacco to an amount equal to 70 per cent of their normal exports, evidently on the theory that after the war this tobacco can be sold in the European markets. As the Georgia markets opened in early August prices of the new crop averaged from 17 to 20 cents, or from 2 to 5 cents above last year's averages.

For the year ending June 30, 1930, North Carolina state revenues amounted to a little more than \$37,000,000; for the year ending June 30, 1940 they were slightly above \$76,000,000. In other words, the state's revenues more than doubled during the ten-year period. During the same time the net debt of the state was reduced by more than \$27,000,000 from \$153,733,000 to \$126,348,000. On June 30, 1940, the accumulated surplus was \$8,359,154, of which \$3,016,088 was in the general fund and \$5,020,646 was in the highway fund. The bulk of the 1940 revenues were produced by 4 taxes as follows: gasoline, \$25,906,000; sales, \$12,206,000; income, \$12,007,000; auto, \$8,486,000. The total of \$76,000,000 was approximately \$6,500,000 greater than in any previous year.

By accepting full responsibility for financing all roads and public schools North Carolina has gone farther than almost any other state in transferring governmental functions from local governments to the state. Yet census figures for 1937 show that in the per capita cost of operating state governments, North Carolina ranked 37th, with a figure of \$15.95 compared with \$21.23 for the United States. Only 3 southern states—Louisiana, Florida, and Texas—had higher per capita costs.

The Fourth Annual North Carolina Bankers Conference met in Chapel Hill during the week of July 8-12. Primary emphasis was placed on loans and investment problems with special attention to mortgage lending which was discussed by Dr. E. M. Fisher. Farm loans were analyzed by Mr. A. G. Brown and personal loans by Mr. Lewis F. Gordon and Mr. Walter B. French. Investment problems were discussed by Dr. Laurence Lundeen and Mr. E. S. Adams. Among the evening speakers were Dr. Harold G. Moulton and Dr. Paul F. Cadman. More bankers were in attendance than at any preceding conference.

Duke University

B. U. RATCHFORD

SOUTH CAROLINA

Governor Burnet R. Maybank has appointed a committee of 5 to serve as a clearing house for data on the state's resources and to consolidate such data for presentation to the federal government in connection with the national defense program. The committee, which has been designated as the South Carolina Defense Council, is composed of the following men: W. P. Jacobs, manufacturer and educator, chairman; J. E. Serrine, industrial engineer; Charles P. Summerall, college president; LeRoy Lee, business man; and B. M. Edwards, banker. The governor described the movement as designed to "mobilize" data regarding the state's resources which might prove useful to federal authorities in expanding the national defense program. Among the assets mentioned as being available special reference is made to the state's highly developed textile industry, the Santee-Cooper Power Company, kaolin mines, etc.

The South Carolina State Planning Board has announced that its efforts are being directed toward the completion of an industrial survey of the state, designed to focus attention upon progress and potentialities of industrial development. Professor R. L. Sumwalt of the University of South Carolina is chairman of the board.

Another effort to utilize gasoline tax receipts for general state purposes has been made by the South Carolina legislature. A somewhat different piece of legislation was declared unconstitutional by the State Supreme Court less than one year ago. The present situation is interesting for another reason: the "diversion clause" was first inserted in the appropriation bill *with the approval of staunch friends of the state Highway Department* who had consistently opposed any tampering with revenues from gasoline and motor vehicles. They gave as a reason that they knew they were "licked." The Governor, who has been just as consistent in advocating the use of such funds for general purposes, *vetoed* that section of the appropriation bill which provided for "diversion" on the ground that it was clearly unconstitutional and would not accomplish the avowed intent of the legislators. He proposed instead an act which he had prepared and which, it is believed, will meet previous objections of the court. After heated debate the Governor's proposal was enacted into law carrying with it

authority to use something like \$2,000,000 of the normal receipts of the Highway Department for general state purposes. The court will be called upon to rule on the matter early in October. Meanwhile receipts from gasoline taxes have reached a new high level and now exceed the receipts at the time the bond act was passed by approximately \$4,000,000 annually.

Clemson College

G. H. AULL

TENNESSEE

Approximately 2500 men are now busily engaged in the construction of a plant for the manufacture of slow burning smokeless powder about 15 miles north of Memphis in the vicinity of the village of Millington. There had been rumors for several months that such a plant was contemplated but no trustworthy information was available until June 4 when the Anglo-French Purchasing Board announced in New York that the plant would be built by E. I. du Pont de Nemours and Company for the Tennessee Powder Company, a new corporation being formed by the board to supply France and Great Britain with smokeless powder. Since the capitulation of France the work has continued, presumably for the British. Little information is available locally regarding the degree to which the government of the United States is a participant. The plant is expected to be in operation by the close of this year.

The project involves approximately 100 buildings. The 6000 acre tract on which they are being constructed was formerly used for agricultural purposes. It was bought at an average cost of about \$100 per acre including payment for crops that could not be harvested. The minimum estimate of the cost of the entire project is \$25,000,000 and it is expected that not less than 7000 people will be employed in its operation at an average wage of \$2,000 per year. One of the principal buildings will be a \$4,000,000 power plant.

Local representatives have been assured that when the emergency has passed the powder plant will be converted and continued in operation along other lines. Memphis has hopes that it may become an important center in the operations of the du Pont Company.

The Union Planters National Bank and Trust Company of Memphis has opened a branch at Millington to take care of the banking business that has developed as a result of the construction of the powder plant and a second bank has been announced to open September 1.

Fifty leading cattle breeders of Arkansas, Mississippi and Tennessee met in Memphis July 6 and organized the Mid-South Hereford Breeders' Association. The cattlemen listed the following objectives of the association:

1. To promote interest in and popularity of the Hereford cattle in the Mid-South.
2. To encourage national recognition of the Mid-South as a beef cattle producing area.
3. To meet for mutual discussions of problems and improvement of production.
4. Joint effort to discourage all legislation harmful and detrimental to production of beef cattle in the Mid-South.
5. To seek equalization of freight rates.

After an absence of nearly 25 years the Great Atlantic and Pacific Tea Company will open a master store in Memphis about October 1. A. and P. withdrew from Memphis after a period of fierce grocery competition.

The improvement in the market for American cotton during the past year is reflected in the fact that more cotton was handled through Memphis during the year ending July 31 than in any previous year. Gross receipts were 3,619,579 bales as compared with a previous record in 1937-38 of 2,719,180. Gross shipments were 3,684,607 bales. The previous record, established in 1936-37, was 2,700,753 bales.

The second annual conference of the Tennessee Bankers was held on the University of Tennessee campus, September 8-13.

The National Policy Committee and the Southern Policy Committee held a Mid-South Citizenship Conference in Memphis, September 13 and 14.

The American Institute of Accountants met in Memphis, October 14-18.

Southwestern

RALPH C. HON

VIRGINIA

In a previous issue of this journal it was stated that, according to expectations, there would be at the end of the fiscal year on June 30, 1940, a surplus in the treasury of Virginia of approximately \$1,000,000. It is now reported from the office of the state comptroller that the amount of unobligated surplus on this date was \$2,634,916.

The occasion of this increase in the surplus of the general fund rests primarily in the fact that various state departments, instead of spending all of their allotted funds, turned back into the treasury at the end of the biennium, a total of \$1,255,684, or approximately one-half of the unobligated surplus. In addition to this unexpected balance, however, there were increases in several sources of tax revenue, as follows: corporation tax returns, \$439,605; profits from the sale of liquor in state stores, \$244,373; beer and beverage excise taxes, \$172,945. Other increases in general fund revenues came from taxes on individual incomes, intangible personal property, insurance companies and miscellaneous items.

The state's share of profits from the sale of liquor during the year amounted to \$3,025,519, as compared with \$2,781,147 in the preceding fiscal year. There was also an increase in beer and beverage excise taxes. However, there are indications that the point of diminishing returns may have been reached as a result of the very substantial rise in liquor taxes. On July 1, 1940, both the state and federal governments imposed additional burdens on the sale of liquor, with the result that gross sales have declined. It appears likely that the profits of the system, which are shared by the state and the local governments, will show a decline during the current fiscal year.

The total expenditures from all funds during the past year were \$93,320,397. For the fiscal year, 1939, state tax revenues from all sources amounted to \$60,119,671.* In order of importance, the tax sources may be listed as follows: gasoline, 28.64 per cent; payroll, 16.51 per cent; alcoholic beverage, 11.24 per cent; motor

* From an article by J. H. Russell in the *Virginia Commonwealth*, August, 1940, p. 7.

vehicle, 11.18 per cent; public utility, 7.80 per cent; corporation and state income taxes, 7.05 per cent; licenses other than motor vehicles, 5.20 per cent; intangible personal property, 4.30 per cent. The remaining 8.08 per cent of tax revenue was derived from taxes on insurance companies, polls, inheritance and gift taxes, corporation franchises, fees, etc., recordation fees and the tax on shares of bank stock. Total receipts from all sources for the year ending June 30, 1940, were \$96,234,587.

University of Virginia

TIPTON R. SNAVELY

PERSONNEL NOTES

Conley R. Addington has been appointed assistant professor of accounting at the University of Miami.

Roscoe Arant, professor of economics at the University of Mississippi, served as special economist for the Mississippi State Tax Commission during the summer. During the year of 1940 and 1941 he will also serve as research economist for the recess committee of the legislature on tax reform.

B. P. Beckwith, associate professor of economics in the School of Commerce, University of Georgia, has resigned.

E. M. Bernstein, professor of economics at the University of North Carolina, spent the second part of the summer doing research in monetary theory in the Treasury Department in Washington.

W. K. Bing, instructor in agricultural economics at Clemson College, has returned to his duties after studying in the School of Rural Social Economics at the University of Virginia.

Frances Blackmon has been added to the faculty of the Department of Secretarial Training at Alabama Polytechnic Institute.

Allen T. Bonnell, assistant professor of economics at the University of North Carolina, has been granted a leave of absence for 1940-41 to handle foreign exchange problems for the American Friends Service Committee in Europe. John W. Gunter and Gerald Brown have been appointed to take over his teaching duties.

Brant Bonner has resigned as instructor in economics at the Women's College of the University of North Carolina to finish his graduate work at the University of North Carolina.

John F. Burke has been appointed to an assistant professorship in accounting in the School of Commerce of the University of Georgia.

William F. Butler has been appointed instructor in commerce at the University of Virginia for 1940-41.

James J. Carney, Jr. has been appointed assistant professor of finance at the University of Miami.

S. L. Clement of North Carolina State College of the University of North Carolina spent half of last year in the Department of Economics at Harvard University.

Robert Collins has been appointed instructor in accounting at the University of Florida.

John W. Deitz has been appointed part-time instructor in business finance at the University of Florida.

John E. Dykstra, formerly of the University of Missouri, has been appointed associate professor of business administration at the University of North Carolina.

McKee Fisk, formerly professor of business education at Oklahoma Agricultural and Mechanical College, has been appointed professor and head of the Department of Secretarial Science at the Woman's College of the University of North Carolina.

W. H. Glasson, formerly dean of the Graduate School and chairman of the Department of Economics and Business Administration at Duke University, is now professor emeritus. Calvin B. Hoover now holds the positions formerly held by Dean Glasson.

R. E. L. Greene has returned from a year's graduate work at Cornell University to North Carolina State College of the University of North Carolina. He will do research in farm management.

Edwin C. Griffith of the University of Virginia has accepted an assistant professorship in economics in the School of Commerce of the University of Georgia. By error it was announced in the July issue of this journal that he had joined the teaching force of Virginia Polytechnic Institute.

Earl J. Hamilton of Duke University delivered a lecture on "Prices, Wages and the Industrial Revolution" at the Bicentennial Conference of the University of Pennsylvania on September 19.

J. Edward Hedges has resigned his assistant professorship in economics at Emory University to accept an appointment at Indiana University.

Clarence Heer has returned to his teaching duties at the University of North Carolina after spending a year as fiscal advisor in the Social Security Administration in Washington during 1939-40.

Calvin B. Hoover of Duke University is a consultant for the Advisory Commission to the Council on National Defense.

David Ross Jenkins of Columbia University has been appointed assistant rural sociologist and assistant professor of rural sociology at Clemson College. Dr. Jenkins occupies the position vacated by the resignation of Dr. B. O. Williams who has joined the teaching staff of the University of Georgia.

John W. Kendrick will spend this year in the School of Commerce of the University of Georgia, filling the place of one of the regular teachers who is away on leave.

E. A. Kincaid of the University of Virginia is continuing this year to act as consulting economist on part-time for the Federal Reserve Bank of Richmond.

Eric Lawson, formerly professor of business administration at Susquehanna University, is now associate professor of business and economics at Davidson College.

V. E. Lindsey, formerly of des Moines, Iowa, has been appointed instructor of accounting at the Woman's College of the University of North Carolina.

Boyce Ficklen Martin, assistant dean, Harvard Graduate School of Business, has been named dean of the School of Business Administration at Emory University to succeed Dean Edgar H. Johnson, retired.

Clifford E. Maser has been appointed to the faculty of business administration at Rollins College.

C. Arnold Matthews, instructor in economics at West Virginia University, is doing graduate work at the University of Virginia.

Robert M. Musselman is serving as instructor in accounting at the University of Virginia.

Nilan Norris has been appointed assistant professor of commerce at the University of Miami.

O. V. Overholser, professor of insurance at the University of Miami, will be on leave the coming academic year to pursue graduate work at the University of Pennsylvania.

G. H. Parker has resigned his assistant professorship of secretarial science at the Woman's College of the University of North Carolina to join the staff of the University of Tennessee.

Milo J. Peterson, assistant agricultural economist in the South Carolina Experiment Station at Clemson College, has returned to his teaching duties after completing his work for the Ph. D. degree last summer at Cornell University.

Andrew W. Pierpont and Willis Weatherford, Jr. have been appointed teaching fellows in the Department of Economics and Commerce at the University of North Carolina for the academic year 1940-41.

Robert E. Rapp has resigned from the University of Tennessee to accept an appointment as professor of economics at the University of California at Los Angeles.

Ernest Riley has been appointed agent in the Agricultural Marketing Service of the U. S. Department of Agriculture to work in cooperation with Clemson College on cotton marketing problems.

R. T. Segrest, assistant professor of economics in the School of Commerce of the University of Georgia, has been granted a year's leave of absence, which he will spend at New York University working towards a doctor's degree.

Edward P. Shahan has been appointed instructor in economics and statistics at the University of Miami.

Glenn R. Smith, formerly associate agricultural economist at North Carolina State College of the University of North Carolina, has accepted a position as director of research with the Farm Credit Administration, Columbia, S. C.

Tipton R. Snavelly of the University of Virginia recently served as a public member of the Committee on the Luggage Industry of the Wage and Hour Division of the U. S. Department of Labor.

W. P. Trumbell, instructor of accounting at the University of Mississippi, is on leave of absence to continue graduate work at the University of Michigan.

E. S. Wallace, formerly of Hendrix College, has been appointed professor of economics at Millsaps College.

Robert C. Weems, Jr. of Mississippi State College has returned from a year's leave of absence spent in graduate study at Columbia University. He has been appointed acting dean of the School of Business and Industry and director of the Business Research Station at Mississippi State College.

Frank J. Welch of Mississippi State College has returned from a two-year leave of absence spent in graduate study at the University of Wisconsin. He has been promoted to head of the Department of Economics and Sociology, having served as acting head before his leave.

H. A. White, formerly agent in the Agricultural Marketing

Service in cooperation with the South Carolina Experiment Station, has been made assistant agricultural economist and will devote all of his time to research in marketing in the Department of Agricultural Economics and Rural Sociology at Clemson College.

Rex S. Winslow, associate professor of economics at the University of North Carolina, served as research associate in the U. S. Department of Agriculture in Washington during the summer.

Joseph H. Young has been appointed assistant professor of secretarial studies at the University of Miami.

NOTES

The Nominating Committee of the Southern Economic Association consisting of Professor James W. Martin, Chairman, University of Kentucky; Dean Lee Bidgood, University of Alabama; and Professor G. T. Starnes, University of Virginia, has been appointed by the President of the Association. Members of the Association are invited to make such representations as each may desire to this committee with respect to the officers of the Association for the next year.

The next annual meeting of the Southern Economic Association will be held jointly with the American Economic Association in New Orleans December 27 to 30, 1940. Headquarters are the Roosevelt Hotel.

BOOKS RECEIVED

- Die räumliche Ordnung der Wirtschaft.* By August Lösch. Jena, Germany: Verlag von Gustav Fischer, 1940. Pp. viii, 348. Paper covers. RM 12.
- The Forgotten Gospel.* By Cephas Guillet. Dobbs Ferry, N. Y.: Clermont Press, 1940. Pp. 395. \$2.50.
- Rural Regions of the United States.* By A. R. Mangus. Washington: U. S. Government Printing Office, 1940. Pp. ix, 230.
- A History of Economic Ideas.* By Edmund Whittaker. New York: Longmans, Green & Co., 1940. Pp. xii, 766. \$4.00.
- An Exploratory Memorandum on Partial Unemployment Benefits in State Unemployment Compensation Systems.* By J. J. Joseph. Washington: Committee on Social Security of the Social Science Research Council, 1940. 60 cents.
- Monopolistic Competition and General Equilibrium Theory.* By Robert Triffin. Cambridge: Harvard University Press, 1940. Pp. xiii, 197. \$2.50.
- Administration of Public Welfare.* By R. Clyde White. Cincinnati: American Book Co., 1940. Pp. xiv, 527. \$3.25.
- Current Policies in Personnel Relations in Banks.* By Helen Baker. Princeton: Industrial Relations Section, Princeton University, 1940. Pp. 50. \$1.00.
- Whale Oil: An Economic Analysis.* By Karl Brandt. Stanford: Food Research Institute, Stanford University, 1940. Pp. xi, 264. \$3.00.
- Milk Distribution as a Public Utility.* By W. P. Mortenson. Chicago: University of Chicago Press, 1940. Pp. xviii, 221. \$2.50.
- Principles of Economics.* Vol. I. By Lewis A. Froman. With the Editorial Assistance of Harlan L. McCracken. Chicago: Richard D. Irwin, Inc., 1940. Pp. xii, 702. \$2.50.
- Money and Banking.* By Charles L. Prather. Revised Edition. Chicago: Richard D. Irwin, Inc., 1940. Pp. xvi, 903. \$4.00.
- Unemployment Compensation Interpretation Service.* Benefit Series, Vol. 3, No. 2, February, 1940. U. S. Social Security Board. Washington: U. S. Government Printing Office. Pp. 290. Monthly, \$5.00 per year.
- Labor Problems.* By Gordon S. Watkins and Paul A. Dodd. Third Edition. New York: Thomas Y. Crowell Co., 1940. Pp. xii, 1128. \$3.75.

THE GOVERNMENT AND AGRICULTURE

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U. S. Department of Agriculture

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